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President's Page

PUBLIC RELATIONS

For years the self-sacrificing, self-effacing family doctor—healer, philosopher, councilor—was a prototype. In the past two decades, however, the medical profession has been assailed for all the sins of omission and commission that flesh is heir to. It has been called a union, a trust, and a monopoly and has been accused of failure to serve the medical needs of the people. It has been charged with conspiracy to limit the number of doctors, and its opposition to compulsory health insurance has been attacked as a selfish determination to preserve the status quo.

The causes for this change of attitude are many. They can be found in the rapid increase in population, the shift of population from farm to city, and the changing social and economic conditions. As society becomes more complex, as medicine gets more departmentalized and more individuals are needed to make a diagnosis and render treatment, the tendency to lose the personal touch is tempting.

Furthermore, there are those who think that man's social ills can be removed by government fiat and centralized planning. Although these planners, or socialists, thus far have been thwarted in their efforts to foist government medicine upon the people, they have instituted a subtle campaign to discredit American medicine. The results have not been futile. A segment of our population has been led to view the doctor with suspicion. Where they have failed to discredit the local doctor, the planners sometimes have led the people to distrust doctors in groups or associations.

The medical profession, assailed by a frontal attack of the planners and by the sapping effects of too many middle-men and too many impersonal contacts, began to counterattack. Appeal was made to those who had become expert in public relations, and the doctors heeded their advice: "Set your house in order and take the offensive."

Cooperation with press and radio was achieved. Grievance committees to hear complaints of patients against doctors were formed;

experts in business, labor, the press, education, and government were invited to point out frankly where the profession had fallen short. Opposition to compulsory health insurance was not abandoned, but the accent was placed upon the positive. Doctors supported federal aid for hospital construction; cooperated in bringing the best medical care to veterans; created a national committee on rural health to consider the problems of scarcity of medical services in rural areas. The American system of medical practice was sold to the people by citing our low death rate and the increased life expectancy of practically 70 years. In addition, doctors have become conscious of their influence as individual citizens and have campaigned for the candidates of their choice.

For the past eight years the Texas Medical Association has had an active Committee on Public Relations under the direct supervision of the Board of Trustees. It has been ably headed in turn by Drs. Merton M. Minter, George A. Schenewerk, and R. W. Kimbro and has blazed the way for better public relations for the doctors of Texas. To the credit of the committee we can point to wholesome press and radio cooperation, to medical sections in local papers, to the readiness of doctors to present the medical situation at all times in the most favorable light. The committee also has worked with the Committee on Rural Health to further every effort to get more and better medical service for rural areas. For this year the objectives are (1) the formation of a grievance committee in every local society, (2) the promotion of a system of telephone exchanges for emergency calls, (3) the insistence upon more house calls, and (4) the study of good public relations by the telephone operator, the receptionist, and the nurse. We look forward with assurance that these goals will be vigorously sought. If they are achieved, we will have better public relations, and socialized medicine will be a far cry.

Allen J. Stewart

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PHYSICIANS' INCOMES, 1929-1949

The average net income of all civilian physicians has more than doubled in the twenty year period since 1929, but this relative increase is practically identical with that for all earners in the general population over the same period.

This observation is one of the salient facts revealed by the survey which was conducted jointly in 1950 by the Office of Business Economics of the United States Department of Commerce and the Bureau of Medical Economic Research of the American Medical Association. Of a total of 125,000 physicians who received questionnaires, more than 55,000 (roughly 2 out of 5) responded, making the project the broadest mail questionnaire survey of professional incomes ever made in the United States.

The first results of the survey are published by the Department in an article, "Income of Physicians, 1929-1949," by William Weinfeld in the July issue of *Survey of Current Business.* Weinfeld's article is summarized and analyzed in an article in the July 28 issue of *The Journal of the American Medical Association;* an editorial in the same issue further clarifies findings of the survey.

Comparison of the increase in incomes of physicians with those of the general population shows that the mean net income of all civilian physicians before taxes were deducted rose from $5,304 in 1929 to $11,058 in 1949, a percentage increase of 108 per cent, whereas incomes for all earners in the general population increased 109 per cent. From this comparison it seems evident that the upward curve of incomes of doctors and of their patients closely paralleled each other during the inflationary 1940's.

Other pertinent facts disclosed by the survey are as follows:

1. Specialists, on the whole, earned more than general practitioners. Full-time specialists earned a mean net income of $15,014; general practitioners in independent practice averaged $8,835. This difference was not as great percentagewise as it was in 1929, however.

2. Of specialists, neurosurgeons, pathologists, and roentgenologist-radiologists reported the highest incomes. Weinfeld reported that the highest incomes are received by physicians in the specialties having the fewest members.

3. Higher incomes were reported from medium-sized (populations of about 350,000) rather than larger cities. Geographically, the highest incomes were earned in the Far West and the lowest in New England.

4. The mean net income of nonsalaried physicians rose 125 per cent during the twenty year period, whereas those of nonsalaried lawyers increased by only 46 per cent and of nonsalaried dentists by only 67 per cent. Studies covering the late 1920's and early 1930's indicated that lawyers' incomes were higher than those of physicians, a reversal of the present picture. Excluded from the 1949 study, however, were interns, residents, and fellows-in-training; had they been included, the average net income of all physicians would have been 10 per cent lower, according to Weinfeld. No comparable segment of the legal or dental profession could be omitted from the survey.

5. About 4 out of 5 physicians made most of their medical income from independent practice. Although the differences between the average incomes of the all-salaried and nonsalaried physician are great ($3,310 uncorrected for age differences), the former group has certain financial advantages which are not reflected in cash compensation. Among these benefits are paid vacations, sick leave, insurance, and pensions.

6. The greatest incomes were reported by doctors in their middle 40's. The A.M.A. Bureau could not supply the Office of Business Economics at the appointed time with the data necessary to eliminate age as a factor in any of the computations.

7. The moderate increase in physicians' fees, 38 per cent since the 1935-1939 base period, is only one factor in the increase in incomes. The other two equally important elements are improved collection of fees and the increased output per physician.

A physician who wishes to use the survey to determine whether his income was above or below average in 1949 must take into consideration two factors: the relationship of age to earnings in his profession and the general increase in income of the American people, which on the average doubled between 1929 and 1949. Copies of Weinfeld's article may be obtained without charge from the Bureau of Medical Economic Research, American Medical Association, 535 North Dearborn Street, Chicago 10.

Two conclusions which may be drawn from the survey are that no nationwide shortage of physicians exists and that the small and medium-sized cities, rather than the large cities, provide the practitioner with greater economic advantages. More important, this report and additional studies projected by the Bureau using the survey figures offer physicians and the public at large statistics which should help to erase some of the misconceptions cherished by certain segments of the citizenship. Comments about the income enjoyed by members of the medical profession have been bandied about in recent years without statistics to justify them. Inasmuch as physicians' fees have risen only 38 per cent while their incomes have increased 108 per cent and all incomes have increased 109 per cent, it seems evident that the doctor's share in the medical care dollar has not risen disproportionately nor have his earnings skyrocketed at the expense of his patients.

ACCORDING TO HOYLE

Edmond Hoyle in 1743 prepared a book containing short treatises on five indoor games. Since that time his name in the English speaking world has become synonymous with authentic rules.

Equally definitive in its field is the printed Constitution and By-Laws of the Texas Medical Association, which is the rule book for each physician and county or district medical society affiliated with the state organization. A new edition incorporating all of the amendments adopted at the recent annual session has just been published. This edition for the first time includes a comprehensive index, which should make reference to specific subjects much simpler than has been true in the past.

The new edition of the Constitution and By-Laws is being mailed to officers of the Association and to secretaries of county medical societies. Although the supply is limited, other members who need a personal copy may receive one upon request.

It is hoped that the addition of an index

to the Constitution and By-Laws will encourage physicians to consult it frequently and will help to keep individual members and component societies progressing "according to Hoyle."

SOCIAL IMPLICATIONS OF MEDICAL PROGRESS

The effect which medical progress has had on our way of life—the problems which it has solved and the problems which it has created—has been the subject of considerable speculation. Recently, Frank G. Dickinson, Ph. D., director of the Bureau of Medical Economic Research of the American Medical Association, spoke on this subject at the annual session of the American College of Physicians. Some of the questions he raised are worthy of serious thought.

Life expectancy has increased from 49 years in 1900 to about 69 years now with the median age at death increasing from 30 years in 1900 to 66 years in 1950. This achievement has been the result partially of better food, better housing, better sanitation, and other factors, Dr. Dickinson reminded, but primarily of advances in medicine. This increase in the length of life has changed the make-up of the population of the United States: While the entire population has doubled in the past half century, the number of persons 65 years of age and older has quadrupled.

Three important changes in our culture have resulted from this longer life, Dr Dickinson pointed out. In the first place, increasing numbers of aging persons who cannot compete in industry with younger workers forces into retirement more and more persons. Because they are forced to live on reduced incomes and do not find satisfactory avocations to replace the jobs they have left, they become disgruntled and frustrated and tend to advocate increased pensions and social security benefits. Such benefits, of course, can be effected only at the expense of younger members of society.

Second, the exactitudes of medical science which have promoted healing at the same time have helped to destroy the rapport between doctor and patient which made the physician a treasured friend in days gone by. The "art" of medicine suffers every time a new discovery enhances the "science" of medicine; as the art of medicine suffers, respect for the medical profession is endangered. Furthermore, even as life is lengthened, the patient yearns for still longer life. He demands that the physician provide the fountain of youth, even if he must be legislated into providing it.

The third cultural change Dr. Dickinson referred to is the decreased interest and faith in religion. Although man instinctively reaches out to Something beyond himself, his concern with the infinite is fed by the fear of death. With the expectation that, barring accident, life on this earth will be long and the pleasures of the world will be many, man today does not feel the urgency of making peace with his God nor hunger for the faith which comforted his fathers.

In each area of change steps should be taken to understand the problems and weigh the consequences, Dr. Dickinson declared. The standards of social morality in his opinion must be raised by considering the effects old-age security measures would have upon youth and by recognizing that a younger generation must not be exploited unduly by its elders. It must be realized also that the threat of socialized medicine results in part from medical progress and the consequent aging of the population. Finally, he asserted, religion must not be allowed to degenerate into a moral philosophy concerned primarily with "the here and now."

The conclusion which Dr. Dickinson reached merits consideration by members of the medical profession: Inasmuch as physicians have had a large role in the health progress which has created the problems of which he spoke, they face the challenge to study those problems, to under-

stand them, and to cooperate with all segments of society in resolving them.

It is encouraging to have someone closely related to the medical profession, sympathetic to it, aware of its achievements and its shortcomings, astute enough to analyze its problems in relation to those of society as a whole, and willing to appeal to its members to share in the solution of the problems which it has helped to create.

CURRENT EDITORIAL COMMENT

POSTGRADUATE SCHOOL OF MEDICINE

The Postgraduate School of Medicine was established as an independent branch of the University of Texas in the Texas Medical Center on authority of the Fiftieth Legislature. A full-time dean was appointed in September, 1950.

As it is organized now, the Postgraduate School has three areas of activity:

1. *Refresher Courses.* These courses, designed for general practitioners and specialists, cover the practical aspects of advances in medical science in the various specialties, particularly as they apply to the general practice of medicine. During the past year, 515 physicians enrolled for the courses given in Houston, San Antonio, Corpus Christi, and McAllen. The courses vary in content and plan of teaching to suit the needs and facilities in the various locations and to avoid duplication of other postgraduate activities in the state.

2. *Residency Training Programs.* It was planned that the Postgraduate School of Medicine should have affiliating hospitals in Houston and throughout the state, in which the Postgraduate School would attempt to coordinate the various residency programs. The goal is to secure a larger number of residents for the hospitals in areas outside the Medical Center and to allow the residents in the Medical Center to obtain experience in the practice of medicine in communities outside the metropolitan area. This phase of the program has started slowly because of the shortage of residents due to the military situation.

3. *Research Projects.* The stimulation and sponsoring of these projects are to be carried on in the M. D. Anderson Hospital for Cancer Research, Houston.

The School is supervised by a full-time dean in Houston, a full-time assistant dean in San Antonio, an assistant dean in Temple, and a director in San Angelo. The nucleus of the faculty is the full-time staff of the M. D. Anderson Hospital and physicians experienced in teaching who are in practice in Houston, San Antonio, San Angelo, and Temple.

Central administrative offices are in the Hermann Professional Building, Houston. When the University has more adequate housing facilities in Houston, these offices probably will be moved into some University structure. Branches of the Postgraduate School are located at Robert B. Green Memorial Hospital, San Antonio; Shannon West Texas Memorial Hospital, San Angelo; and Scott and White Clinic and Scott, Sherwood and Brindley Foundation, Temple. As finances and facilities become available, it is planned to increase the branches throughout Texas to seven.

To date, the finances have come from two sources: grants from private foundations, and tuition fees from doctors attending courses. The M. D. Anderson Foundation of Houston and the San Antonio Medical Foundation made appropriations to operate the Postgraduate School

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This department of the JOURNAL *presents editorial comments on current items pertaining to the science, art, and practice of medicine, contributed by members of the Texas Medical Association and scientists closely associated with the medical profession of Texas. Invitation is hereby extended to any member of the Texas Medical Association to submit such discussions for this department. The discussions should not be more than 500 words in length.*

during its first year. Another grant for a two-year period has been made by the M. D. Anderson Foundation and for a one year period by the San Antonio Medical Foundation. Activities in San Angelo are supported by the Shannon West Texas Memorial Hospital, and in Temple by the Scott and White Clinic and Scott, Sherwood and Brindley Foundation.

During the coming year we hope to offer courses in Austin, El Paso, Temple, Corpus Christi, San Antonio, San Angelo, Houston, and somewhere in the Panhandle.

JACK R. EWALT, M. D., Dean,
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Houston, Texas.

Hermann Professional Building.

ORIGINAL ARTICLES

CLINICAL EVALUATION OF NPH-50 INSULIN IN THE MANAGEMENT OF DIABETES MELLITUS

A. E. GROFF, M.D.; H. T. ENGELHARDT, M.D., F.A.C.P.; and J. M. SKELTON, M.D., Houston, Texas

ONE half of the approximate 50 per cent of diabetic patients whose disease is uncontrollable by diet alone can be controlled satisfactorily by globin zinc or protamine zinc insulin. There remains a substantial number, perhaps 25 per cent of all diabetic patients, in whom management of the disease proves difficult and in whom control in the generally accepted meaning of this term,* is seldom achieved by the depot insulins. This latter group is referred to as having moderately severe, severe, or "unstable" diabetes. In these patients a single daily injection of protamine zinc insulin frequently fails to control postprandial glycosuria without producing nocturnal hypoglycemia, whereas unmodified or crystalline insulin alone necessitates undesirable multiple injections daily.

To circumvent these difficulties, extemporaneous mixtures of protamine zinc insulin and unmodified insulin in variable proportions have been resorted to with moderate degrees of success. At best, however, this mixing of insulins in the syringe at the time of injection proves troublesome to the patient and frequently is inaccurate because of the patient's inability to prepare the mixture correctly. Prepared mixtures supplied by the manufacturer in the past have proved too unstable to be of much use. MacBryde, searching for a stable preparation with the advantages of a mixed insulin, devised an insulin modification known as NP-50,[6, 7, 8] a noncrystalline compound containing 0.50 mg. of protamine per 100 units of insulin buffered to a hydrogen ion concentration of 7.2. NP-50 insulin has not proved as stable as anticipated, however, presumably because of its noncrystalline nature.

Reports of a new crystalline protamine zinc insulin prepared by Krayenbuhl and Rosenberg in Hagedorn's laboratory were first published by Peck[10] in 1946. Clinical studies by several groups of investigators[2, 3, 5, 9, 10, 11, 12, 13] have been reported and the results have been promising. This preparation, known as NPH-50 insulin, first became available to us in sufficient quantity for systematic study in January, 1950,† and the data secured during its use provide the basis of this report.

NPH-50 insulin may be defined as a depot or modified insulin, crystalline in character, with a hydrogen ion concentration of 7.2, containing 0.50 mg. of protamine and from 0.02 to 0.05 mg. of zinc to each 100 units of insulin. It appears to have an action curve similar to that of a 2 to 1 mixture of regular and protamine zinc insulin although it is reported to have a slightly more prolonged yet less intense effect.[4] Since it contains no unbound protamine, crystalline insulin may be added to it without loss of independent action of the latter.[2, 11, 12]

PLAN OF STUDY

The studies were undertaken with three objectives in view: (1) observations on the efficacy of NPH-50 insulin alone in the management of a group of patients with moderately severe diabetes, (2) comparison of NPH-50 insulin and protamine zinc insulin in the management of the disease in these patients,

From the Department of Internal Medicine, Baylor University College of Medicine, and the Jefferson Davis Hospital.
Read before the Section on Internal Medicine, Texas Medical Association, Annual Session, May 1, 1951.

**By "control" is implied maintenance of blood sugar levels within the normal range and complete absence of glycosuria.*

†NPH-50 insulin used in this study was supplied by Eli Lilly and Company, Indianapolis.

and (3) comparison of NPH-50 insulin and extemporaneous mixtures of unmodified or crystalline insulin with protamine zinc insulin in variable proportions.

The 17 patients used in the study belong to the group clinically classified as having moderately severe, severe or "unstable" diabetes. All were so classified only after sufficient study and attempts at regulation had proved their disease difficult to manage with a weighed diet and variable dosages of the

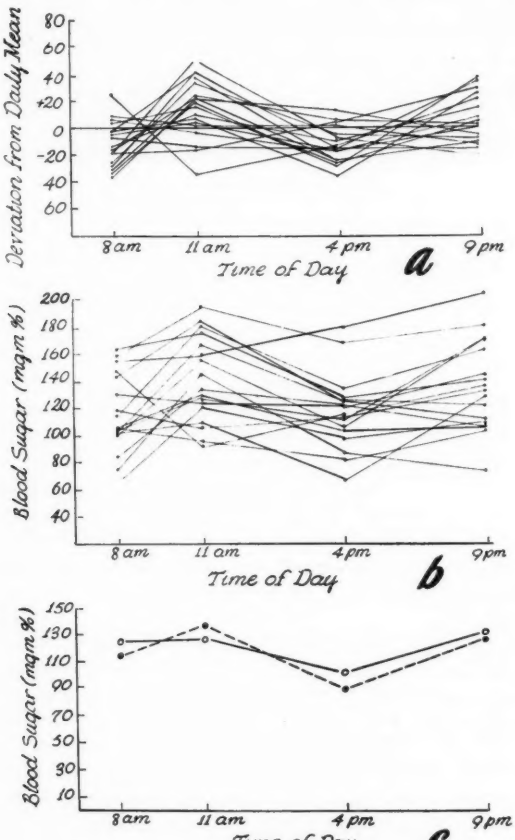


FIG. 1a. A diagram showing the activity curve of NPH-50 insulin during a twenty-four hour period in 17 patients.

b. A diagram showing the blood sugar levels of 17 patients treated with NPH-50 insulin.

c. A diagram showing the average blood sugar levels of 5 patients secured with two different lots of NPH-50 insulin.

standard protamine zinc insulin, unmodified insulin, and mixtures of the two.

Table 1 summarizes the pertinent facts concerning the selection of patients. The average daily requirement of crystalline, protamine zinc, or NPH-50 insulin was 71 units, ranging from 30 to 130 units. Of the 17 patients 15 received 40 units or more of insulin daily. The average age was 43 years and ranged from 19 to 74 years. Thirty-five per cent were younger than 30 years and 65 per cent were younger than 50 years. There were 11 men and 6 women. Nine of the patients were Negroes and eight white. The longest known duration of the disease in any patient was fifteen years, whereas 3 patients were unaware of the disease until hospitalization was necessitated by severe diabetic acidosis. All patients were free from evidence of infection or other discernible complicating factors and all were confined throughout the study period to the wards of the hospital.

Patients received three weighed meals daily; inbetween meals and bedtime feedings were observed to be unnecessary. The diet in all patients was calculated to contain 30 calories per kilogram of body

TABLE 1.—*Average Daily Requirement of Crystalline, Protamine Zinc, or NPH-50 Insulin for 17 Patients.*

Case	Age	Sex	Race	Duration of Diabetes	Daily Insulin Requirement (units)
1	62	M	N	10 yr.	130
2	46	F	W	7 yr.	80
3	47	M	W	13 yr.	60
4	56	M	W	3 mo.	30
5	21	F	W	3 yr.	70
6	21	M	N	0	100
7	63	M	W	15 yr.	60
8	74	M	W	10 mo.	80
9	23	M	W	0	110
10	70	M	N	10 yr.	90
11	27	F	N	6 mo.	50
12	40	F	N	7 yr.	60
13	29	F	N	9 mo.	50
14	19	M	W	7 yr.	70
15	49	F	N	10 yr.	35
16	41	M	N	5 yr.	90
17	51	M	N	0	40

weight, the ratio of carbohydrate to protein to fat being 2 to 1 to 1. In 14 patients the available carbohydrate was distributed at breakfast, lunch, and dinner in the ratio of 1/5, 2/5, and 2/5, whereas in 3 the carbohydrate was divided equally among the three meals. The diabetes was first controlled as well as possible in all patients, using protamine zinc insulin either alone or in combination with crystal-

TABLE 2.—*Average Blood Sugar Levels of 17 Patients Treated with NPH-50 Insulin.*

Case	Daily Insulin Requirement (units)	Average Blood Sugar (mg. per 100 cc.) 8 a. m.	11 a. m.	4 p. m.	9 p. m.
1	130	147	91	112	143
2	80	102	93	80	102
3	60	84	136	126	108
4	30	104	166	125	121
5	70	163	176	131	161
6	100	64	120	103	104
7	60	155	158	178	203
8	80	74	143	85	71
9	110	117	107	110	158
10	90	114	180	124	139
11	50	101	153	104	169
12	60	159	197	169	180
13	50	102	109	65	127
14	70	105	125	96	110
15	35	104	129	111	132
16	90	130	124	122	109
17	40	143	182	123	136

TABLE 3.—*A Comparison of the Relative Efficiency of NPH-50 and Protamine Zinc Insulin in 4 Patients.*

Case	Insulin	Amount (units)	Blood Sugar Levels (mg. per 100 cc.) 8 a. m.	11 a. m.	4 p. m.	9 p. m.
12	NPH-50	60	159	197	169	180
	PZI	60	170	196	170	178
13	NPH-50	50	102	109	65	127
	PZI	50	121	168	126	191
14	NPH-50	70	105	125	96	110
	PZI	70	64	171	178	244
15	NPH-50	35	104	129	111	132
	PZI	35	123	159	189	251

line insulin. After apparent stabilization, an additional two day period was allowed before venous blood was drawn for sugar determinations in the fasting state (8 a.m.), thirty minutes prior to feeding at 11:30 a. m. and 4:30 p. m., and again at 9 p. m. NPH-50 insulin was then administered alone, once daily one-half hour before breakfast, in an amount equal to the total amount of protamine zinc insulin with or without unmodified insulin established as the daily insulin requirement during the control period. At the end of three days of stabilization, samples of blood were again drawn as described above for sugar determinations. Blood sugar determinations were made after the method of Benedict.[1]

OBSERVATIONS

Of the 17 patients treated with NPH-50 insulin, 14 exhibited satisfactory fasting blood sugar levels (table 2). It appears that in the remaining three instances (cases 5, 7 and 12) amounts of insulin larger than those used were indicated, for in these patients the blood sugar levels were higher than desirable at all times. In the 14 in whom satisfactory fasting blood sugar levels were obtained, no clinically perceptible hypoglycemic episodes were observed, and it can be seen from table 2 that the blood sugar levels were held within satisfactory limits throughout the day in 10. In 3 patients, hyperglycemia was observed at 11 a. m. and in a fourth at 9 p. m., although the remaining blood sugar determinations throughout the twenty-four hour period were within a satisfactory range.

The activity curve of NPH-50 insulin during the

TABLE 4.—*A Comparison of the Efficiency of NPH-50 Insulin and a Mixture of Protamine Zinc and Regular Insulin in 7 Patients.*

Case	Insulin	Amount (units)	Blood Sugar Levels (mg. per 100 cc.) 8 a. m.	11 a. m.	4 p. m.	9 p. m.
6	NPH-50	100	64	120	103	104
	PZI 30 / REG 70 mix.		82	48	94	113
7	NPH-50	60	155	158	178	203
	PZI 20 / REG 40 mix.		104	102	242	140
8	NPH-50	80	74	143	85	71
	PZI 25 / REG 55 mix.		109	199	153	98
9	NPH-50	110	117	107	110	158
	PZI 30 / REG 70 mix.		36	30	79	30
10	NPH-50	90	114	180	124	139
	PZI 20 / REG 40 mix.		81	161	85	112
11	NPH-50	50	101	153	104	169
	PZI 15 / REG 30 mix.		88	205	80	158
16	NPH-50	90	130	124	122	109
	PZI 20 / REG 50 mix.		157	129	138	157

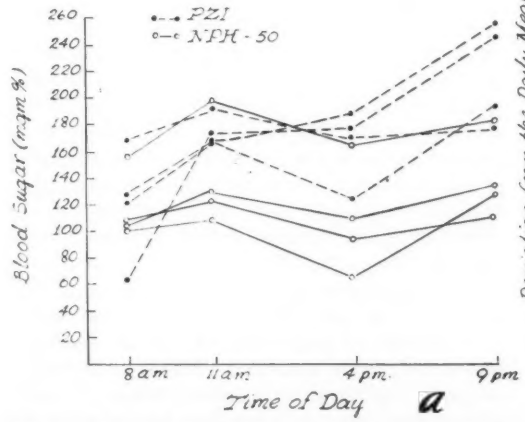
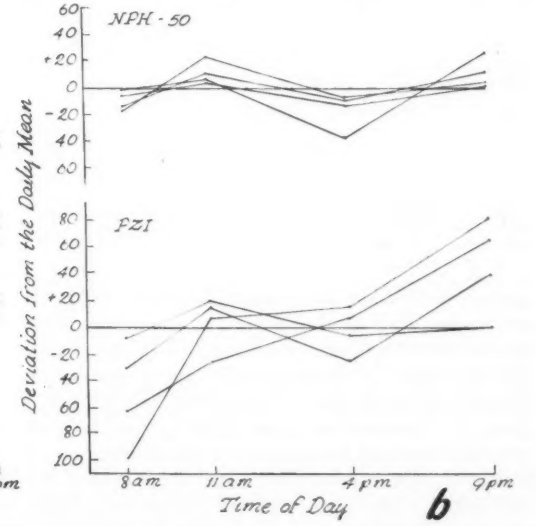


FIG. 2a. A diagram of the blood sugar levels in 4 patients obtained with a single daily injection of protamine zinc and with NPH-50 insulin.



b. A diagram showing the deviations from the daily mean blood sugar level in 4 patients.

twenty-four hour period may be demonstrated by plotting the deviation from the daily mean of the individual blood sugar determinations against the time of day (fig. 1a). It should be noted that each point in this and in subsequent figures represents the average findings at the given time during the days on which the patient received the specified insulin. The uniformity of activity of NPH-50 insulin is clearly depicted in this figure. It can be readily observed that no great deviation from the mean occurs.

In figure 1b are plotted the blood sugar levels of the individual patients. It is seen that in this group of 17 patients NPH-50 insulin exerts its greatest influence approximately from eight to nine hours after subcutaneous injection.

To be of value any insulin preparation must be stable for a reasonable length of time and must be constant in effect from one lot to another. This

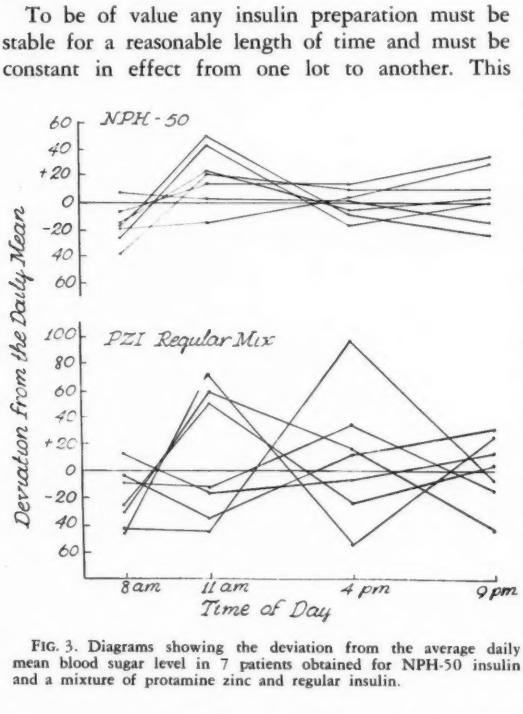


FIG. 3. Diagrams showing the deviation from the average daily mean blood sugar level in 7 patients obtained for NPH-50 insulin and a mixture of protamine zinc and regular insulin.

prerequisite had not been proved for NPH-50 insulin and investigation of this point was undertaken. Two lots of NPH-50 insulin were supplied by the manufacturer. After a control period during which the patient was maintained on protamine zinc insulin, a group of 5 patients was given NPH-50 insulin in an amount equal unit for unit to the preceding dose of protamine zinc insulin. Four days were allowed for stabilization, then blood sugar estimations were made during the fasting state, before lunch, before dinner, and at bedtime daily for four days. After this an equivalent amount of a different lot of NPH-50 insulin was given for eight days, the first four days being allowed for stabilization.

In figure 1c is presented the average blood sugar levels in these 5 patients, the levels secured with one lot represented by solid lines and those secured with the other lot by broken lines. It appears that the two lots of NPH-50 insulin studied were reasonably equal in effectiveness and it may be justifiably assumed that other lots are comparable.

COMPARISON OF NPH-50 AND OTHER FORMS OF INSULIN

Protamine Zinc Insulin.—The relative efficiency of NPH-50 insulin and protamine zinc insulin was observed in a small group of 4 patients. One of these patients, case 12 in table 3, received inadequate amounts of both protamine zinc and NPH-50 insulin; with neither form were normal fasting blood sugar levels obtained. In the other 3 patients, however, better control was attained with NPH-50 than with protamine zinc insulin. These observations are shown graphically in figure 2.

In figure 2a the average blood sugar levels obtained with a single daily injection of protamine zinc and with NPH-50 insulin are plotted. It can be seen that unit for unit NPH-50 insulin is comparable to protamine zinc insulin in maintaining the fasting blood sugar within normal limits but is superior in the control of midmorning and midafternoon blood sugar levels. The fact that it has its peak activity approximately eight hours after subcutaneous injection is again seen in this figure. In figure 2b deviations from the daily mean blood sugar level are plotted. Again, the smooth blood sugar level obtained with NPH-50 insulin is clearly evident.

Extemporaneous Mixtures of Protamine Zinc and Regular Insulin.—In a group of 7 patients efficiency in management with NPH-50 insulin and with a mixture of protamine zinc insulin and regular insulin in variable proportions was compared. The total amount of insulin in the mixture did not necessarily equal the amount of NPH-50 insulin administered, for the amount and the ratio of protamine zinc to regular insulin in the mixtures were varied to obtain the best possible control. Amounts of each type of insulin administered and the average blood sugar levels obtained in each patient are presented in table 4.

The deviation from the average daily mean blood sugar level obtained for the different blood samples for the NPH-50 insulin and the various mixtures are shown in figure 3. This figure illustrates that NPH-50 insulin is equally as effective as the 2 to 1 mixture of protamine zinc and crystalline insulin in the control of fasting, midmorning, midafternoon, and bedtime blood sugar levels. It will be noted, however,

that the total amount of the mixed insulins is less than the amount of NPH-50 insulin which must be given.

CONCLUSIONS

From the data presented herewith it appears that the following conclusions with regard to NPH-50 insulin may be drawn:

1. It has a remarkably uniform activity during a twenty-four hour period.

2. It is reasonably uniform from lot to lot.

3. By its use in many patients with severe or "unstable" diabetes one may obtain fasting blood sugar levels within the normal range without producing nocturnal hypoglycemia or postprandial hyperglycemia.

4. Its peak of activity occurs approximately eight or nine hours after subcutaneous injection.

5. It is superior to protamine zinc insulin in the control of diabetic patients needing more than 30 units of insulin daily.

6. It compares favorably with extemporaneous mixtures of protamine zinc insulin and unmodified insulin.

It is not implied that NPH-50 insulin is a panacea in the management of the patient with severe diabetes despite the favorable impression obtained from its use in these patients. NPH-50 insulin appears to be useful and to have definite advantages over the conventional protamine zinc insulin in the management of diabetes in these patients, but undoubtedly many of them will require mixtures of either protamine zinc or NPH-50 insulin with unmodified insulin before adequate control can be achieved.

SUMMARY

An evaluation of NPH-50 insulin at the clinical level was undertaken in a group of 17 hospitalized diabetic patients. The patients were so selected as to include only those with moderately severe or severe diabetes who were free of all discernible complicating factors.

The studies were undertaken with three objectives: (1) observation of the efficacy of NPH-50 insulin alone in the management of the disease in these patients, (2) comparison of NPH-50 insulin and protamine zinc insulin in the control of severe diabetes, and (3) comparison of NPH-50 insulin and extemporaneous mixtures of unmodified or crystalline with protamine zinc insulin in various proportions.

Herewith presented are data which we believe indicate that NPH-50 insulin has a definite place in the insulin therapy of diabetes mellitus and that it is particularly valuable in the management of severe or so-called "unstable" diabetes.

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ABSTRACT OF DISCUSSION

DR. EDWIN L. RIPPY, Dallas: This paper on the various insulins and combinations available today for the control of diabetes with special emphasis on NPH-50 insulin is timely. This insulin represents an undoubted advance in the therapy of this disease. The multiplicity of insulins, however, proves confusing to patient and doctor alike and it may be worth while to review the various forms and to indicate their chief uses.

Briefly the seven principal insulins and combinations are:

1. Regular: because of its rapid action, to be used in acidosis, as a supplement to protamine zinc insulin, and when "insulin on demand" is indicated (as postoperatively).

2. Crystalline: as a supplement to protamine zinc insulin, separately or in mixture.

3. Protamine Zinc Insulin (Alone): in the patient with mild to moderately severe diabetes whose total daily dosage does not exceed 40 units and who is willing to eat a light breakfast, medium lunch, larger supper, and bedtime snack as prescribed.

4. Globin: in the patient with mild diabetes with relatively normal fasting blood sugar and postprandial glycosuria whose total insulin requirement does not exceed 30 units daily.

5. Protamine Zinc and Regular Insulin (Separately in the Morning): still a good and flexible plan for the patient with erratic diabetes whose total need does not exceed 60 units (protamine zinc insulin maximum 40 units) and whose insulin needs appear to vary daily.

6. Insulin Mixtures: except in experienced hands, the 2 (regular) to 1 (protamine zinc) is prefered; a favorable insulin for patients with moderate to severe diabetes whose daily needs exceed 40 units; a stepping stone to, and probably will be replaced by, the comparable in effect, NPH-50 insulin.

7. NPH-50: an excellent insulin for patients with diabetes

NPH-50 INSULIN — Groff et al — *continued*

of all degrees of severity; it is quite active by day and capable of producing a normal fasting blood sugar in patients with well controlled diabetes.

The paper by Dr. Groff and his associates is justly favorable to this new insulin combination.

One point I would like to emphasize is that dietary regulation is still of basic importance in the control of diabetes. In addition to the well recognized need for control of the total amount of food and regularity of eating, the distribution of food so that its absorption will roughly parallel the absorption of the insulin used is often the decisive factor in good control. In general, protamine zinc insulin requires the 1/5 to 2/5 to 2/5 plus the bedtime snack, whereas globin insulin, the mixture of 2 parts of regular insulin to 1 part of protamine zinc insulin, and NPH-50 insulin require usually 1/3, 1/3, afternoon snack, 1/3. It is to be remembered that if control of diabetes in a given patient appears erratic, the need is not always for another form of insulin or more or less of the same type but often for an alteration of food distribution—a task in which cooperation of the patient is essential.

Apparently other insulin combinations are forthcoming and perhaps someday it will be possible to imitate activity of the normal pancreas with insulin even better. I heard Dr. Charles Best say last year that an insulin for oral administration is not impossible.

TRANSPERITONEAL IMPLANTATION OF LOW INTENSITY RADIUM NEEDLES

Preliminary Report

R. S. CLAYTON, M. D., Dallas, Texas

THIS is a preliminary report of experiments designed to determine whether it is technically possible and reasonably safe, using interstitial low intensity radium needles, to deliver to the pelvic walls and ureters of dogs an amount of gamma radiation which could be expected to cure metastases from carcinoma of the cervix in human beings. Summaries of the first cases in which this technique was applied to human beings are included.

BIOPHYSICAL AND HISTORICAL CONSIDERATIONS

The fact that rates of cure in patients with carcinoma of the cervix have increased little in the past fifteen years has stimulated a vigorous reexamination of both the surgical and radiologic methods of treating this disease. In 1950 Morris and Meigs called attention to the magnitude of the problem, stating that for 1942-1944 carcinoma of the uterus was responsible for 19.3 per cent of all deaths from cancer in women and for 2.5 per cent of all deaths from any cause in women in Massachusetts. They believed that carcinoma of the cervix comprises 4 of every 5 cases of cancer of the uterus. In their own words, "One of the real challenges of the problem of cancer of the cervix lies in the 80 per cent of cases which are at present considered inoperable and in which the cure rate with radiation is so low." After describing the confusion which still exists in regard to specification of dosage of radium, they pointed out that calculations of isodose curves show often that distal extensions of a given tumor do not receive a cancerocidal dose from the radium. They believe that therapy should be expressed in terms of gamma roentgens delivered to the periphery of the tumor in addition to the usual milligram hour totals.

Healy in 1934 stated that he rarely failed to cure the cervical lesion with radiation but that a high percentage of the patients still died from pelvic metastases. He said, "I have shown that it is necessary to increase the radiation effect throughout the parametria if we are to increase the percentage of five year cures in our favorable cases. It is absolutely essential that we find a way to do this."

Toward the end of the second decade of this century, radiotherapists began to suspect that failure to deliver adequate radiation to the regional lymph nodes was at least partially responsible for their inability to cure many patients with cancer of the cervix. Several investigators tried the logical method of irradiating the parametria with interstitial radium and radon sources inserted at laparotomy.[5] However, because of the use of too few sources of radiation, lack of an adequate unit of dosage, and inadequate knowledge of tissue tolerance and cancerocidal dosage levels and because only part of the cancer bearing area of the pelvis was irradiated, these methods never were successful in increasing rates of cure and have since been abandoned. Despite the many ingenious techniques using roentgen rays and radium designed to increase the dose of radiation to all parts of the pelvis, the latest reported rates of cure with radiotherapy are still low.

A justifiable fear of the higher dosages has developed because of some unfortunate experiences with interstitial radiation by early workers who had neither a good unit of dosage nor rules which would

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Read before the Section on Radiology, Texas Medical Association, Annual Session, Galveston, May 2, 1951.

make possible an even distribution of radiation. However, the brilliant work of Paterson and Parker[12] removed the necessity for relying solely on clinical observation for dosage evaluation and gave interstitial radiation therapy a sound and precise basis. Radiotherapists finally were provided with a workable and simple system for computing the intensity of radiation about radium sources and with means for compensating for the steep dosage gradient about these small sources. On the other hand, this rapidly decreasing intensity of radiation can be used to great advantage in avoiding damage to normal structures lying close to malignant foci. Using the system developed by Paterson and Parker, it is possible to maintain strict control of tissue dosage and to distribute uniformly any predetermined amount of gamma radiation throughout any volume of tissue.

Because certain articles undoubtedly have seriously discouraged interstitial irradiation, a study of some of these reports is especially interesting. Taylor and Twombly[15] of Memorial Hospital, New York, compared the use of interstitial radon needles with intravaginal roentgen therapy in carcinoma of the cervix uteri. The study was stimulated in part at least by the good results reported from the use of interstitial low intensity radium needles by Pitts and Waterman[13, 14] and others.[3, 16] The Pitts and Waterman technique utilizes 3.0 and 4.5 cm. active length needles containing 0.66 mg. of radium per linear centimeter and filtered with 0.5 mm. of platinum. Taylor and Twombly used 2.0, 3.0, and 4.0 cm. active length gold cells containing variable amounts of radon in steel needles; 12 of these needles had a total length of 36 cm. The total radon content varied from 60 to 212 millicuries with an average of 100 millicuries. Therefore, the loading of radon varied from 1.6 to 5.8 millicuries per centimeter, making the radiation intensity at the beginning of the treatment from 2.4 to 8.8 times as high as from the Pitts and Waterman needles. An equal amount of radon was used in an intrauterine tandem and a total exposure of 6,000 millicurie hours was given. Because of the variable quantities of radon, irradition times ranged from twelve to fifty hours, averaging thirty hours. The Pitts and Waterman technique has a treatment time of 168 hours.

It would be of interest to know the individual variation in strength among the radon needles used by Taylor and Twombly. The exact composition of the walls of the needles is not known, for the statement that they were made of gold cells in steel sheaths with wall thicknesses of 0.3 mm. is not clear. Whether the gold cells had walls 0.3 mm. thick with the steel serving as additional filter or whether the total thickness of gold and steel was 0.3 mm., I do not know. If the total thickness is assumed to have been 0.3 mm., then a considerable component of beta particles must have added to the biologic effect of the gamma radiation. The researchers called attention to the differences in filtration, distribution, number of sources, time of administration, and possible differences in experience of the surgeons. However, their paper is still offered as an oblique comparison with the Pitts and Waterman technique by the use of italics in their statement, "We have concluded that *in our experience* the use of interstitial radon needles is relatively ineffective and dangerous as a method of controlling cervical cancer and we have abandoned it . . . ." The painful reactions which they obtained might well have been expected.

Although the literature contains extensive reports of damage to the ureters by malignant growths, concern also is frequently expressed for possible danger to the ureter from radiation therapy. Martin and Rogers[9] in 1926 placed steel needles containing 6.25 mg. of radium on each side of the ureters of dogs and demonstrated that more than 75 mg. hours produced complete stricture. Since the active length, filtration, and distance separating the two needles was not stated, dosage to the ureter cannot be calculated. A large amount of beta radiation must have contributed to this reaction, for Martin has mentioned elsewhere[8] his disappointment with the painful reactions from the use of these needles in patients. He recognized the value of heavy filtration in preventing painful reactions due to beta radiation and reported that 2.5 erythema doses of gamma radiation to the ureter produced no effect. He has also stressed the highly important time factor in radiation therapy.

Heavy filtration, accurate placement of sources, proper time of irradiation, proper dose levels, a knowledge of the natural history of the disease, and modern methods of pre-irradiation and post-irradiation management are absolutely essential to the successful radium therapy of malignant tumors.

Because metastases in the pelvis must be destroyed without compromising the integrity of the bladder, rectum, small intestine, ureters, and blood vessels, many feel that cancer in the lymph nodes of the pelvis cannot be cured with radiation. However, Martin has cured epidermoid carcinoma in the lymph nodes of the neck with interstitial radium irradiation combined with external roentgen therapy. There is every reason to believe that cancer in the pelvic lymph nodes can be cured also if adequate, carefully controlled, uniform dosage of gamma radiation is delivered in a suitable time interval. *However, the failure to include even one small focus of malignant tissue in the field of adequate dosage can be expected inevitably to result in failure to cure a high percentage of patients.*

To plan a reasonably safe technique designed to destroy foci of carcinoma of the cervix in the parametria and pelvic walls, two figures must be determined with reasonable accuracy: (1) The amount of gamma radiation which, if given or exceeded in a specified time and in a moderate volume of tissue, will result in a significant incidence of tissue necrosis, that is, *the normal tissue tolerance limit,* and (2) the minimum amount of gamma radiation which, if delivered in a specified period of time, will destroy a high percentage of malignant tumors originating in the uterine cervix, that is, *the minimal lethal dose for carcinoma of the cervix.*

If the minimal lethal dose is less than the tissue tolerance limit by an amount large enough to provide a reasonable working tolerance within interstitial radium patterns, then the perfection of a suitable technique would seem possible.

Frazell correlated calculated tumor doses with five year survivals and found that only 19 per cent of

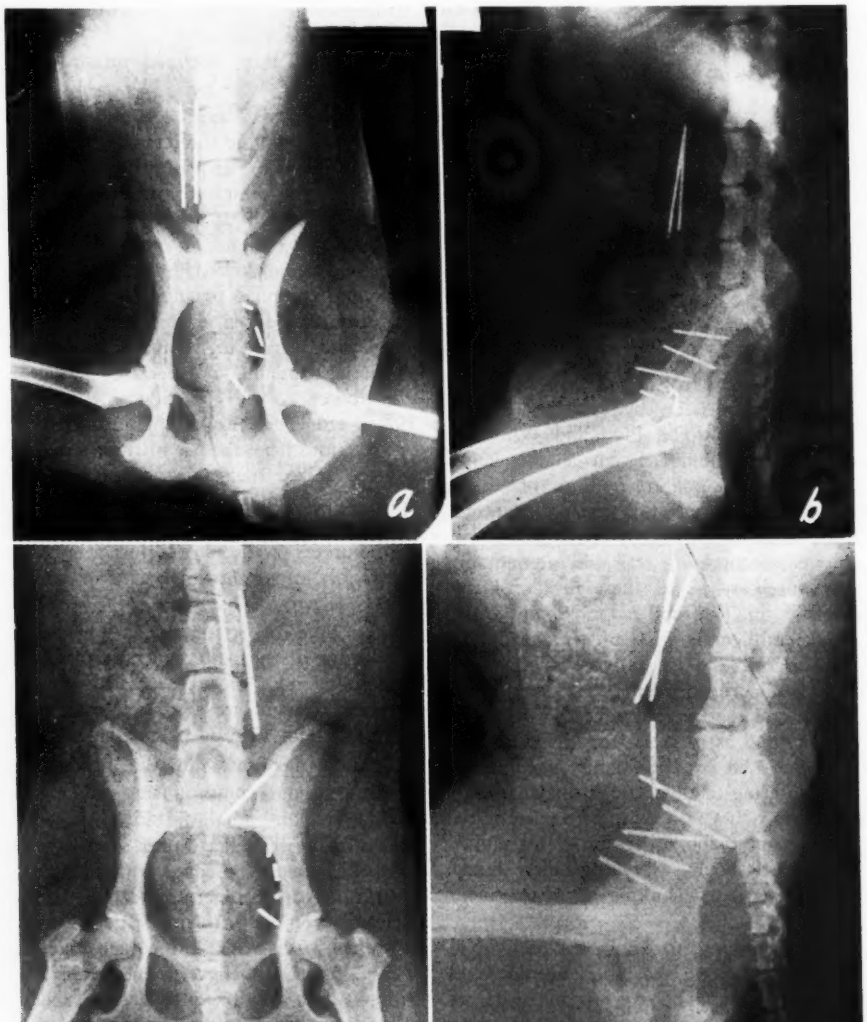

FIG. 1. Needle patterns in dogs.
a. Anteroposterior radiograph of needle pattern in dog 7.
b. Lateral radiograph of needle pattern in dog 7.
c. Anteroposterior radiograph of needle pattern in dog 10.
d. Lateral radiograph of needle pattern in dog 10.

patients receiving less than 6 erythema doses survived, whereas 52.1 per cent of those given more than 9 erythema doses survived that period. Tod[17] postulated an optimum dosage for carcinoma of the cervix. She showed that the maximum rate of cure was associated with dosage of about 11,000 r to the paracervical area within 3.5 to 7 weeks. Since she added x-ray and gamma roentgens, this figure must be taken with great reservations. She also showed that when more than the optimum dosage was given, a "supralethal effect" was produced, with reduction in the rate of cure.

Nolan and Quimby[11], in calculating intensity patterns from intracavitary and interstitial radium, mal lethal dose and 15,000 gamma r for tissue tolerance limit permit a tolerance of 8,000 gamma r within interstitial patterns. The Paterson and Parker system allows a variation of plus or minus 10 per cent of the chosen dosage. It is recognized that the variation clinically will be somewhat greater than this figure.

Some therapists have delivered relatively high doses into the parametria and pelvic walls without significant incidence of complications and with highly encouraging cure rates. Corscaden[6] and his colleagues, employing the precision stereoscope to study the radium distribution, used interstitial needles to deliver 14,300 gamma r to the paracervical triangle and more than 10,000 gamma r to the lateral pelvic wall opposite the cervix in 120 hours.

TABLE 1.—*Summary of Experiments on 9 Dogs from May, 1950, to March, 1951.*

Dog	Location of Needles	Dosage (Gamma Roentgens)	Method of Removing Needles	Difficulties	Postradiation Course	Life After Irradiation (mo.)	Death	Autopsy	Positive Findings at Autopsy
1	Rt. pelvis–3 med. Sigmoid colon–1 med.	2,000-6,000 5,200-8,000	Laparotomy	Hemorrhage Infection Adhesions	Immediate slow downhill	1 2/3	Sudden	Eaten by cell mates	. . . . .
2	Lt. pelvis–4 med. Lt. lumbar–1 long	2,700-10,800 2,000-9,000	Laparotomy	Hemorrhage Difficult closure	Uneventful	5	Killed	Yes	Few adhesions
3	Lt. pelvis–4 med. Lt. lumbar–1 long	2,700-10,800 2,000-9,000	Laparotomy	None	Anorexia Loose stools	1	Killed	Yes	None
4	Lt. pelvis–4 med. Lt. ureter–1 long	2,700-10,800 3,000-6,500	L.L.Q. stab	None	Bloody rhinorrhea	½	Sudden	Yes	Pneumonia Diffuse purulent cystitis
5	Lt. pelvis–4 med. Lt. ureter–1 long	2,700-10,800 3,000-6,500	L.L.Q. stab	None	Bloody rhinorrhea	2/3	Sudden	Yes	Pneumonia
6	Lt. pelvis–4 med. Lt. ureter–1 long	2,700-10,800 3,000-6,500	L.L.Q. stab	None	Bloody rhinorrhea	2½	Sudden	Yes	Pneumonia
7	Lt. pelvis–4 med. Rt. ureter–1 long	2,700-10,800 3,000-6,500	L.L.Q. stab	None	Uneventful	1	Killed	Yes	Adhesions and fat changes in implant area
8	Lt. pelvis–6 med.	3,000-13,000	L.L.Q. stab	Aorta torn by needle insertion	Uneventful	. .	Living	. . .	. . . . .
9	Lt. pelvis–6 med. Lt. ureter–2 long	3,000-13,000 6,000-13,000	L.L.Q. stab	None	Uneventful	. .	Living	. . .	. . . . .

Irradiation time was 168 hours for each dog.

agreed with Arneson's[2] figures, as follows: Less than 4 erythema doses has practically no effect on carcinoma of the cervix; from 4 to 7 erythema doses exerts some control but probably will not cure. From 7 to 15 erythema doses is believed to afford the best rate of cure, while more than 15 erythema doses is likely to produce slough of tissue. 1,000 gamma r represents one erythema dose. However, these amounts of radiation are based on computation in milligram hours without a fixed time of irradiation; therefore, they, too, must be accepted with considerable reserve.

These rough figures of 7,000 gamma r for mini-

In recognizing that an accurate knowledge of anatomy and physics is indispensable in the successful application of this technique, they state, "It [their technique] will hardly be popular with surgeons who do not care to study the principles and details of radium technique nor with radiologists who do not practice surgery."

Barnes and Morton[4] are using slugs of radiocobalt (Co^{60}) in nylon tubes in interstitial irradiation of the parametria. These sources of irradiation are inserted through intravaginal templates, resulting in remarkably accurate placement. A minimum tumor dose of from 6,000 to 7,000 gamma r is delivered

in 168 hours. In unpublished work[10] they have described the use of these flexible tubes inserted directly at laparotomy into intra-abdominal masses of carcinoma. The inactive ends of the tubes brought through stab incisions and were removed without reopening the patient. These investigators have not reported transperitoneal implantation of the entire pelvic walls.

If delivery of cancerocidal doses of gamma radiation to the pelvic walls of dogs proves reasonably safe, it appears that this technique should be given adequate clinical trial.

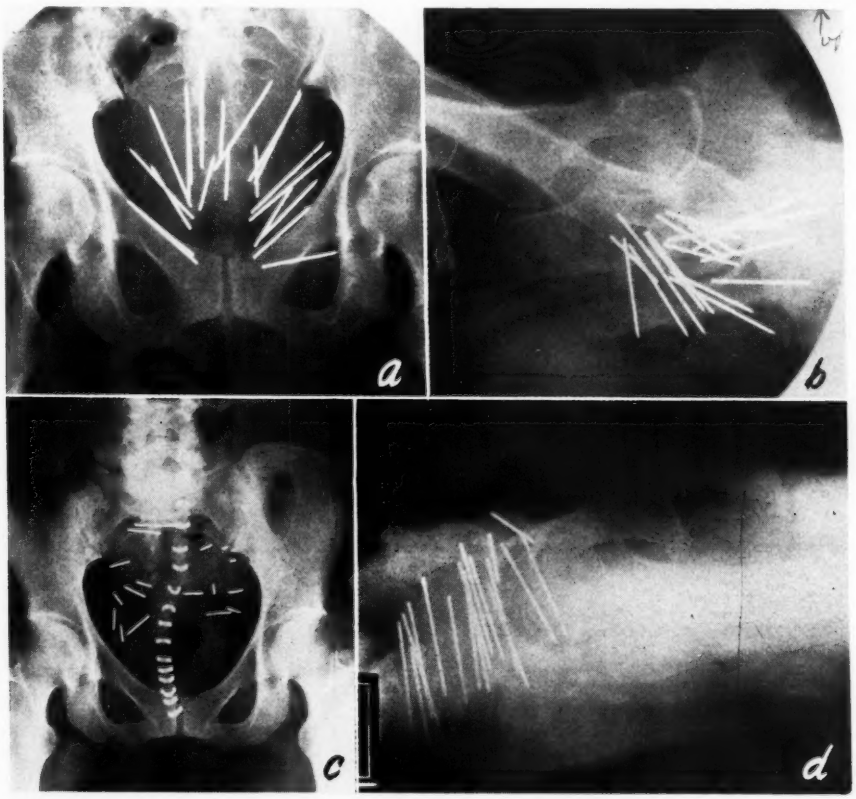

FIG. 2. Needle patterns in human beings.
a. Anteroposterior radiograph of transvaginal needle pattern in case 3.
b. Lateral radiograph of transvaginal needle pattern in case 3.
c. Anteroposterior radiograph of transperitoneal needle pattern in case 3.
d. Lateral radiograph of transperitoneal needle pattern in case 3.

EXPERIMENTAL PROCEDURE

These experiments were designed to determine (1) what dosage of heavily filtered radium radiation the ureters and pelvic wall would withstand without significant damage, (2) what difficulties might be encountered in the transperitoneal implantation of low intensity radium needles, (3) whether the small intestine would be damaged by radiation or traumatized by removal of the needles if allowed to remain in the pelvis during irradiation, and (4) whether the needles could be successfully removed through stab incisions without reopening the abdomen.

Large dogs, usually females in good health weighing about 35 pounds, were used. Only one ureter and one-half of the pelvis were irradiated at any one time to enable the dog to survive while changes in the tissues were taking place. A midline incision was made under Nembutal anesthesia. The needles were inserted into the pelvis in stockade patterns extending from a point anteriorly near the bladder along the pelvic wall to a point near the mesentery of the rectosigmoid colon. The points of the needles were placed deep in the pelvis; the other ends of the needles were placed at or slightly above the brim of the true pelvis. The upper and lower ends of the patterns were not crossed. The ureter was irradiated as it passed through the lumbar region to the pelvis.

A standard irradiation time of 168 hours was used in all experiments.

"Medium" and "long" low intensity radium needles were used. The term "low intensity" means that the radium concentration per centimeter was less than 1.0 mg. The medium needles were 27 mm. total length, of which 15 mm. was active length, had 0.5 mm. platinum-equivalent wall thicknesses, and contained 1.33 mg. of radium. The long needles were 51 mm. total length, of which 40 mm. was active length; had 0.5 mm. platinum-equivalent wall thicknesses; and contained 2.4 mg. of radium.

The pelvic patterns were first composed of 4 medium needles, which delivered a dose ranging from 10,800 gamma r in the center of the pattern to 2,700 gamma r at a point 1.5 cm. toward the midline of the pelvis from the center of the implant. A single long needle was first used to irradiate the ureter, inserted so as to lie directly alongside this structure and just beneath the peritoneum. The ureter opposite the midpoint of this needle received a dose of about 6,500 gamma r.

The abdomen was reopened to remove the needles from the first 3 dogs. In all later experiments threads from the needles were brought through stab incisions in the left lower quadrant of the abdomen at the time of insertion and removed a week later by simple traction. The threads from the needle in the lumbar region in reaching the stab incision were allowed to lie loosely among the loops of intestine. Apparently the threads maintained a tract through the intestinal loops; when traction was exerted on the threads, this sinus straightened and provided a path for the needle to exit from the abdomen. There have been no complications from removal of the needles in this fashion; there were great difficulties in reopening the abdomen.

Table 1 summarizes experience with the first 9 dogs.

Since little evidence of damage was produced at these dose levels, 6 medium needles were used in the same area occupied by the 4 needles of the earlier experiments. This increased the maximum dose to from 12,000 to 13,000 gamma r at the center of the implant. A second long needle was added on the opposite side of the ureter, increasing the dosage to that structure to about 13,000 gamma r. The second needle lay medial to the ureter, which placed it directly on the abdominal aorta and the left common iliac artery. The aorta of dog 8 was torn during insertion of the needle; bleeding was controlled by pressure and no complications resulted. The ureteral implant was abandoned in this dog only. The progress of these dogs is being followed.

Figure 1 shows representative radiographs of the needles in place. The lumbar needles in dog 7 accidentally were placed alongside the right ureter. At autopsy special attention was given to the dissection of this ureter.

One of the principal difficulties in accomplishing these implants was the lack of firm tissue in which to place the needles. For the most part they lay in the properitoneal fat, and the insertion of a needle distorted the bed of its fellows in the small pelvis of a dog. After the pressure of insertion was removed, the tissues sprang back into normal position, and the needles varied somewhat from ideal parallelism as a result. This irregularity of patterns in the dogs could be desirable, showing whether necrosis would be produced by such implants under difficult conditions in clinical application. Though the dogs were given full freedom in their cages, the needles did not wander during the 168 hours, as proved by radiographs taken just after insertion and just before removal. Therefore, the suturing of needles in position is believed to be unnecessary.

These studies are continuing. Closed patterns which will deliver a uniform dosage throughout both pelvic walls are to be investigated. The removal of needles which have been inserted so as to cross the lower ends of the stockade is a problem which must be investigated before being attempted in patients. It is recognized that the dosage which is the upper limit of tolerance of normal tissues has not been established at this time.

CLINICAL INVESTIGATION

The transperitoneal implantation of low intensity radium needles has been performed in 3 patients.

CASE 1.—A 38-year-old Negro woman was referred for radiation therapy to a mass of carcinoma which developed in the right parametrial region after a Wertheim operation for carcinoma of the cervix. Because it was believed that interstitial radium could deliver a greater dose of radiation to the tumor than was possible safely with external roentgen therapy, a transvaginal implantation was attempted. When it proved impossible to reach more than the lower third of the tumor with transvaginal needles, the abdomen was opened and additional needles were inserted into the mass from above. The threads from the intra-abdominal needles were pulled through a wickless small Penrose drain and were brought out through the incision. The needles were removed after five days without difficulty or complication.

Twelve long needles were used transvaginally; 4 long and 8 medium needles were used inside the abdomen. The surgeon would not allow needles to be placed in the portions of tumor nearest the rectum and bladder, and inadequate radiation reached these areas as a consequence. I removed the implant at five days because of uncertainty of the reaction to be expected with this technique. Some reduction of the patient's symptoms of pain and constipation followed, but the tumor soon resumed growth. The patient was still alive at the time this paper was written.

CASE 2.—A white woman aged 42, had a hysterectomy in 1944. Radiation therapy for carcinoma of the cervix was given elsewhere during the period 1944-1950. In May,

1950, an emergency laparotomy was performed to relieve ureteral obstruction and a colostomy was constructed. A vaginal slough developed a few weeks later, followed by steady hemorrhage. In the fall of 1950, an ileovaginal fistula developed; this interfered with nutrition and was very troublesome to the patient. An entero-enterostomy was attempted to improve her state of nutrition.

To study the technical problems associated with the use of intra-abdominal radium in such an advanced stage of the disease, a transperitoneal insertion of low intensity radium needles was planned for the same operation. The colostomy prevented access to the left hemipelvis, but 12 long needles were inserted into the tumor in the right part of the pelvis. It was recognized that this implant would deliver far less than 7,000 gamma r minimum dose to the tumor, which almost filled the right part of the pelvis, in 168 hours. A small vaginal hemorrhage occurred upon removal of the needles but ceased after a transfusion. The patient went into deep shock during the operation and recovered slowly. Though she began to take nourishment, she died ten days after removal of the needles, apparently of inanition.

CASE 3.—This was the first patient on whom we performed elective transperitoneal implantation with intentions of curing carcinoma of the cervix. She was a Negro woman aged 36, who was referred for radiation therapy for carcinoma of the cervix, Schmitz grade 4. During September, 1950, 2,000 r in air was given to each of four pelvic ports, two anterior, two posterior, at the rate of 100 r per port per day. Physical factors were 220 kilovolts, 20 milliamperes, a target skin distance of 50 cm., and a filter of 0.5 mm. of copper plus 1.0 mm. of aluminum. The ports were formed by dividing a single 12 by 20 cm. field with a 2 cm. strip of lead in the midline.

Evaluation of the patient's condition in early October, 1950, showed edema of the floor of the bladder from an extension of tumor along the anterior vaginal wall. A transvaginal low intensity radium needle implantation of the cervical mass, the vaginal extension, and the parametria was performed, using 17 long and 4 medium needles which remained in place for 168 hours. Figure 2 shows these needle patterns. The patient had no symptoms after this therapy, and examination four weeks later revealed no edema of the bladder and no palpable tumor in the pelvis.

The patient agreed to exploratory laparotomy and possible radium implantation. At laparotomy a mass approximately 1 by 2 by 2 cm. was located in the right broad ligament. A second mass about 1 cm. in diameter was found in the left broad ligament. Four long radium needles were inserted vertically into the broad ligaments to lie closely against the medial and lateral sides of both of these masses. A biopsy specimen was not taken. A stockade of long needles was placed in both pelvic walls, beginning behind the rectum and ending at a point well anterior to the plane of both broad ligaments. The most anterior needle on both sides was of medium length. A total of 15 long and 2 medium needles was used. The physical factors of the needles were the same as those described in the experiments on dogs. Threads from the needles were pulled through small wickless Penrose drains, one for the group of needles in each hemipelvis, and were drawn through stab incisions in each lower quadrant of the abdomen. After 168 hours the drains and some of the needles were removed without analgesia; however, when some of the knots of the threads caught against fascial planes, 100 mg. of Demerol was given hypodermically and the remaining needles were removed without difficulty. There were no complications during or after this treatment, nor did the patient have any symptoms or abnormal signs during the five months afterward. Calculated dosage in the intra-abdominal pattern ranged from 2,600 to about 11,200 gamma r. The upper and lower ends of the pattern were not closed; if this had been done, the distribution of radiation would have been much more uniform. Obviously, large areas in the pelvis were not given cancerocidal amounts of radiation with the patterns used in this case. It seemed advisable to use conservative patterns first and gradually to increase the size of the patterns after learning whether the pelvic viscera would withstand the radiation given by this technique.*

COMMENT

Based on the animal and clinical studies performed, there is no indication that serious damage is produced in the pelvic viscera by dosage in the pelvic walls approximating 10,000 to 11,000 gamma r. Because of the rapid fall in the rate of dose with distance from the plane of interstitial radium patterns, I believe that doses of 10,000 gamma r to the entire pelvic walls can be given by this method with little risk. Furthermore, if such dosage be given uniformly through all possible cancer bearing areas, it is logical to expect an improvement in the rate of cure of carcinoma of the cervix.

Finally, exploration of the pelvis by laparotomy is assuredly a much more accurate method of searching for persistent masses of tumor than even the best bimanual examination, particularly in large patients. If transperitoneal implantation of interstitial radium be considered a sound method of treatment, exploratory laparotomy might be done in all clinical stages of this disease. Then, if masses of carcinoma are found, adequate radiation can be given even if the tumor is fixed and not surgically removable.

CONCLUSIONS

The transperitoneal implantation of low intensity radium needles into the pelves of dogs is a reasonably safe and simple procedure. Interstitial radium needles within the abdomen and pelves of dogs were removed easily and safely through stab incisions by simple traction on the threads.

No evidence of damage was produced by 6,500 gamma r delivered in 168 hours to the midportion of the ureters of dogs; 10,000 gamma r delivered in 168 hours to the tissues of the pelvic wall was tolerated well and produced no evidence of significant damage.

The transperitoneal implantation of low intensity radium needles into the pelves of 3 human patients has been performed without evidence of damage and without complications. Interstitial radium needles within the pelves of these patients were removed easily and safely through stab incisions by simple traction on the threads. From 2,600 to 11,000 gamma r

**This patient died of pelvic metastases and hemorrhage August 2, 1951. Autopsy could not be obtained.*

were delivered in 168 hours to the parametria and parts of the pelvic walls by interstitial low intensity radium needles without evidence of damage.

No conclusions concerning the curability of metastases from carcinoma of the cervix using interstitial radium have been reached. The technique described should prove of definite value in the treatment of carcinoma of the cervix. At present, however, further careful development of the method is indicated. It should be used to extend the field of adequate radiation to include all possible cancer bearing tissues of the pelvis after the more standard radiotherapeutic treatment has been given.

I wish to express my deep appreciation to Drs. Charles L. Martin, Carl A. Moyer, and Andrew B. Small for their generous support, advice, encouragement, and criticism during this study.

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TUMOR SEMINAR

Conducted by

ARTHUR PURDY STOUT, M.D., New York, New York

DR. B. F. STOUT, San Antonio, Chairman: It is always a pleasure to meet with this group. Now I am glad to present Major General Arthur R. Gaines, in command of Brooke General Hospital, who will welcome you.

General Gaines: It was a pleasure last year to welcome the San Antonio Society of Pathologists to this meeting and I am going to enjoy being with you again. We are glad to have you here and to have the Brooke name entered on your program. It does us more good by far than it will do you. Our facilities are at your disposal; I hope you will find them adequate and that your stay here may be pleasant and extremely profitable.

Dr. B. F. Stout: I want to call on Col. Carl Lind, chief of the Laboratory Service of Brooke General Hospital, to make some announcements.

EDITOR'S NOTE: *The tumor seminar conducted by Dr. Stout in San Antonio on October 28, 1950, was the seventh such annual conference sponsored by the San Antonio Society of Pathologists and the Texas Society of Pathologists in cooperation with the pathologists of Brooke General Hospital. The material for study was supplied by Texas pathologists. Pathologists from throughout Texas and elsewhere attended the seminar and were furnished histories and slides for the cases under consideration. Additional microscopic slides were projected on a screen as each case was discussed by Dr. Stout.*

Colonel Lind: I would like to give credit to some within our group here in the Army. I particularly wish to commend Capt. Prentis E. Ball, who is in charge of setting up all of our meetings; Mr. Henry S. Marasco, who supervised the taking of the slides and pictures; and Col. Albert M. Richmond, who has carried the load of the work as far as Brooke General Hospital is concerned by centralizing the cases, supervising the more than one hundred slides cut for each case, and choosing the fields for microphotography, as well as a host of other details.

Dr. B. F. Stout: I'm going to ask Dr. A. O. Severance, an old friend and pupil of our guest speaker of the day, to introduce him.

Dr. Severance: It was our own Dr. B. F. Stout who first conceived the idea of these seminars. He decided that it might be interesting to listen to a guest speaker conduct a seminar while we looked through the microscope and studied slides rather than listen to one another present didactic papers. We were fortunate to have as inaugural conductor of ceremonies in 1944 our friend, Dr. A. P. Stout from New York, and we thought it would be nice to have him return

in 1945 to put on the second seminar. In 1946 Dr. Emil Novak from Baltimore was the guest conductor, followed by Col. J. E. Ash from Washington in 1947, Dr. Shields Warren of Boston in 1948, and Dr. Rupert A. Willis from England in 1949. Again this year we turned our eyes to New York and our old friend, Dr. Arthur Purdy Stout.

In 1912, Dr. Stout was graduated from the College of Physicians and Surgeons of Columbia University in New York. The next two years he was at the Roosevelt Hospital as an intern and as a resident in surgery. In 1914, he went to Presbyterian Hospital, where he was instructor in surgery, instructor in surgical pathology, and a worker in the outpatient clinics. In 1918, the United States Army had his services for sixteen months. In 1919, he went back to Presbyterian Hospital, where his attentions were confined solely to surgical pathology. In 1929, he succeeded Dr. William C. Clarke as chief of the Section of Surgical Pathology at that hospital. Two or three years ago he was elevated to the rank of professor of surgery, because the Department of Surgery was jealous of that title and was not particularly willing to confer the title of professor of surgical pathology on a department under its immediate command. Recently he has also been given the title of professor of pathology; therefore, he is concurrently two professors, one of surgery and one of pathology.

He is the author of a well-liked and useful book on tumors, namely, "Human Cancer,"[16] which was published in 1932. All of us, particularly Dr. B. F. Stout and I, have urged a revision or a rewriting of the book but to no avail. Newer worlds are to be conquered; however, the book stays in its present stage and if you can find one you are lucky.

I would like to illustrate the feeling San Antonio doctors have for Dr. Stout. On his second visit in San Antonio I was fortunate in having him as my house guest. While my wife and I were getting ready for a party Dr. Stout, the baby sitter, and my older boy were in the living room. The baby sitter reported later that my 8 year old son looked at Dr. Stout and said, "Dr. Stout, you must be the smartest man in all the world." Dr. Stout asked, "Why do you say that?" The reply was, "You must be. You've come all the way from New York City to San Antonio to teach the doctors here." I think that is what we in San Antonio think of Dr. Stout.

A second incident will illustrate what I think of him. After I came to San Antonio in 1939, to become associated with Dr. D. A. Todd and again with Dr. B. F. Stout, apparently some of my comments and impressions had been conveyed to Dr. B. F. Stout. One day he said, "Dr. Severance, when you die I think you're going to heaven, and do you know where that's going to be? The laboratory of Dr. A. P. Stout back in New York City."

I would like to present to you a man whom we revere and esteem highly and who will be the guest conductor of this seminar, Dr. Arthur Purdy Stout from New York City.

Dr. A. P. Stout: Thank you. I want to say a welcome to all my friends and those whom I have not yet met but who are at this seminar. Since the first in 1944, these seminars have become popular around the country. I cannot recall how many I have already attended but they seem to increase in number every year. I'm going to conduct one next month at Alexandria, Va., another next April at Nashville, in September at Colorado Springs, and in October at Chicago for the American Society of Clinical Pathologists. It keeps me busy preparing my lessons in advance.

We will conduct today's seminar as follows: First, we will throw on the screens lantern slides showing the diagnoses which have been sent in, then photomicrographs of the sections, and occasionally, photographs of specimens and x-rays. In this way I can illustrate and discuss what I saw. I will then discuss the case as a whole. During the discussion if you have questions, please write them on the pieces of paper distributed to you. I will answer them and give you an opportunity to correct me if I am wrong.

INTRAMUCOSAL CARCINOMA (CARCINOMA IN SITU) OF CERVIX UTERI

CASE 1.—Contributed by Dr. A. O. Severance, Baptist Memorial Hospital, San Antonio.

Patient.—49 year old woman.

Specimen.—Cervix uteri.

History.—Hysterectomy was performed for a clinically enlarged fibroid uterus with black mucoid discharge from the cervical canal. Grossly, there was a roughened, moderately pink area surrounding the cervical os, suggesting erosion. Pathologic findings also included leiomyoma and bilateral ovarian endometriosis.

Diagnoses Submitted.—Carcinoma *in situ,* 14; squamous cell carcinoma *in situ,* 1; carcinoma, 1; squamous cell carcinoma, 4; preinvasive carcinoma, 1; Bowen's disease, 1; Bowen's disease and early squamous cell carcinoma, 1; squamous cell metaplasia, 1.

Dr. A. P. Stout: The majority have called it carcinoma *in situ* with the variations in that term squamous cell carcinoma *in situ,* preinvasive carcinoma, Bowen's disease, Bowen's disease and early squamous cell carcinoma, and squamous cell metaplasia. I gather that only one has considered this lesion not some form of cancer. I take it that those who use the name Bowen's disease probably use it synonymously with either the term preinvasive carcinoma or carcinoma *in situ.*

(Lantern slides.) One of the slides, as you see

here, shows an area in the cervix where the mucosa is largely replaced by anaplastic cells which have not descended into the submucosa. The cells are quite variable. In the section that I studied there were a good many mitoses. One of the vital points in this slide that we want to decide upon is whether this change in the type of epithelial cells extends to and includes the most superficial layer. In the picture shown here there may be some question about that because these surface cells are flattened. However, in this higher power representation it may be seen that among these surface cells are some anaplastic ones, and I do not think that any of the cells look like ordinary squamous metaplasia. I am sure all of you know that lesions of this type, whether or not they are true cancer, desquamate easily and these cells can be found in smears and washings. In other parts of this lesion this same kind of proliferation has descended into some of the mucous glands, resulting in the replacement of part of the gland. I do not recall that any one gland was completely replaced but I do not think that is so important. In any event, in the sections which I examined I did not see any place where these anaplastic cells had passed the basement membrane, either of the surface mucous membrane or of the mucous glands, and had invaded the stroma, so that so far as I am concerned it is not an invasive cancer.

The question is whether we are to call this squamous metaplasia, anaplasia, or true intramucosal or preinvasive carcinoma. My inclination is to consider a lesion of this sort a true intramucosal carcinoma.

There are several important aspects to this problem. Probably the most important is how these patients should be treated and how many of these lesions become invasive cancer. The answer to these questions will help to solve the problem of treatment, and we, as pathologists, are often called upon to say how these patients should be treated. In the instance of women who are approaching the menopause or who are through with childbearing and who will not particularly miss the uterus, I do not think we need worry too much. Such patients will certainly be better off with the uterus out. Therefore, I think for them a complete hysterectomy is probably the best and safest treatment. Conization or amputation of the cervix can never guarantee to get all of the cervical tissue. It may succeed but we cannot guarantee it.

The greatest problem comes in the cases in which this lesion is found in young women in their twenties. By long distance telephone, I have had a case described and have been asked to say whether or not I thought the uterus of a 25 year old woman ought to be removed. I refuse to give such advice, pro or con, any more and would advise you not to do it. The pathologist should know everything possible about the case and see the microscopic slides before giving any kind of advice. However, you will be faced from time to time with the problem of the precancerous lesion in young women; sometimes they develop it during pregnancy, which makes the question of termination of the pregnancy, as well as of removal of the uterus, paramount. I am not going to give you the answer to this perplexing question because I do not know what it should be. Before a dogmatic statement can be made, it will be necessary to accumulate enough cases with long follow-ups so that the percentage of such lesions which become infiltrating tumors can be established. It is certain that some of them become infiltrative; there are reports of cases in which, for one reason or another, a biopsy was made, the lesion demonstrated, and nothing further done until the woman returned a year or two later with an invading cancer. But also, in many other cases in which the lesion has occurred, the patient has not had the uterus or cervix removed; the case has been followed, sometimes with successive biopsies over a long period of time; and no invasive cancer during a five to ten year period has been noted.

Gynecologists at the Sloane Hospital, which is part of the Columbia Presbyterian Medical Center, incline to be radical in regard to the treatment of this growth. Taylor, Gusberg, and Coscardin are of the opinion that intramucosal cancer is a real cancer and that when it is diagnosed, the uterus should be removed. However, I have noticed that they do not invariably apply that rule to young women. I pass this information on to you to indicate that there is no settled, definite conception of how these patients should be treated, with perhaps the exception of women 40 years and older.

Dr. M. C. Wheelock, Chicago: Do you think there is any similarity in the morphologic appearance of the cervix of pregnancy and the cervix in which there is a carcinoma *in situ?*

Dr. A. P. Stout: I was afraid somebody would try to pin me down on that point. I do not think the changes are the same. If a carcinoma *in situ* is discovered during pregnancy, there may be a variation in the spread or severity of involvement so that after the delivery, supposing the uterus is left in place, the lesion may apparently disappear. If, however, the lesion is true carcinoma *in situ,* it will reappear at some time. Because of this uncertainty I have always believed that if there is no evidence of invasive cancer, the pregnancy should not be interrupted but that the woman should be allowed to bear the child and go through the delivery; further action can be governed by what is found in succeeding biopsies of the cervix because in this lesion there is quite a leeway of time. It is not necessary to be too hurried in tak-

ing action. I do not know of any case in which the lesion was intramucosal that it was proved to be invasive cancer in less than a year from diagnosis.

Dr. J. J. Andujar, Fort Worth: What about "grading" intraepithelial cancer?

Dr. A. P. Stout: I do not grade. If you want to put intraepithelial cancers into grades, to me they are all grade 4. Grade 4 in an intramucosal cancer does not mean a thing because no matter how anaplastic such lesions look, I do not know of any difference in the degrees of rapidity of recurrence or development of invasive growths.

Dr. C. T. Ashworth, Fort Worth: When the epithelial growth is as active as in case 1, and in instances in which penetration of the deep mucosal glands is seen, do you believe that it is safe not to consider the lesion an invasive carcinoma or at least to treat it as such?

Dr. A. P. Stout: Yes, I do. After having seen a considerable number of such cases, I think that I can tell an invasive cancer from a noninvasive cancer. I do not consider any of them invasive unless I see indisputable proof of cells growing into the stroma without any restraining membranes around them. It is true that mucous glands can become entirely replaced and maybe the lumen filled up solidly with these cells, but I believe that you can always detect the outline of such masses and not be deceived into thinking they are invasive.

Dr. Ashworth: Will you please discuss the necessity of ovariectomy in case of noninvasive carcinoma in which hysterectomy is done; also the use of radium and x-ray in treatment of noninvasive carcinoma?

Dr. A. P. Stout: I cannot see any reason at all for ovariectomy in cases in which hysterectomy is done because if the diagnosis is correct and the carcinoma is noninvasive, it will not have metastasized; therefore, nothing will be left for the ovariectomy to affect. As for the use of radium and x-ray in the treatment of noninvasive carcinoma, our gynecologists and radiotherapists do not favor it because surgical removal is so much more certain. If you subject the cervix to a dosage of radium or x-ray sufficient surely to destroy every cell of the mucous membrane, it is tantamount to giving a definite, full cancerocidal dose such as would be used for invasive carcinoma; that, I believe, is undesirable. I think this treatment is used by some; however, I have no experience with it and I can only tell you that our group does not use it.

Dr. Ashworth: What criteria do you require from the pathologic standpoint in the diagnosis of noninvasive carcinoma, that is, the number of blocks, the amount of cervix available for study, and so forth?

Dr. A. P. Stout: I assume you mean that when a biopsy specimen is taken and no evidence of preinvasive cancer is found, is it proper to consider the patient entirely free from the lesion? No, I do not think so because we all know that a patchy type of involvement in this disease often gives no clinical evidence of its presence. For screening, an ordinary biopsy certainly isn't enough.

There are different methods for taking a strip of mucous membrane that completely surrounds the cervical canal at the squamous-glandular junction. Also, instruments have been devised for taking a strip the length of the canal. One which removes a ring of mucosa devised by Saul Gusberg of Sloane Hospital makes possible a much more efficient biopsy specimen of a considerable amount of cervical mucous membrane. If only one biopsy is to be done, I think it should be repeated in different areas at intervals of three or more months, or perhaps if there is any reason to suspect cancer, several biopsy specimens should be taken at the same time or immediately afterward, for certainly one specimen is not enough unless it includes all of the cervical mucosa.

Dr. William W. Tribby, Memphis, Tenn.: When a diagnosis of carcinoma *in situ* is made, how can one be certain that there is no invasive cancer nearby? Is it not true that carcinoma *in situ* may occur adjacent to or overlying invasive cancer?

Dr. A. P. Stout: Certainly it is true, and you cannot be sure that no invasive cancer is nearby. The advantage, then, of instruments which take more than just a single bit of the mucous membrane is manifest. I thoroughly believe in their use, or, if you do not have them, in multiple biopsies or the stripping of all of the cervical mucosa.

Dr. R. H. Rigdon, Galveston: How do you differentiate between true hyperplasia and an early carcinoma *in situ?*

Dr. A. P. Stout: That is a very difficult matter. It seems to be popular not to call an anaplastic lesion of the cervix carcinoma *in situ* unless the full thickness of the surface mucous membrane is replaced by anaplastic cells all the way to the lumen. The lesion is classified as anaplasia or hyperplasia if it falls short of that and if only the basal half of the mucous membrane is involved. I can only say that this criterion is not applied to other mucous membranes, for instance, the oral mucous membrane, the glans penis, the laryngeal mucous membrane where intramucosal cancer is common, or the conjunctiva. In all of those areas, if a half or two-thirds of the mucous membrane is replaced by anaplastic cells, it has been the custom of pathologists to call the lesion either intra-

mucosal cancer or Bowen's disease, which for me are synonymous. I therefore have been much confused by the necessity of using a criterion for the cervix which differs from that used for other mucous membranes. I think it was Hertig who made this criterion for the cervix and since his experience is vaster than mine, I follow it but with a reserve in my mind. It is also true that the biopsy specimen which you see may not show the full thickness to be involved but, as was pointed out, an adjacent specimen that you may not see may have the full thickness involved.

CYSTIC DISEASE WITH MARKED HYPERPLASIA (WITH CARCINOMA?)

CASE 2.—Contributed by Dr. A. O. Severance, Baptist Memorial Hospital, San Antonio.

Patient.—28 year old woman.

Specimen.—Breast tumor.

History.—The patient complained of continuous clear brown secretion from the right nipple of one month's duration. Several small palpable nodules were removed in a mass 5 by 2.5 by 2 cm. Recurrent bleeding from the right nipple and additional small nodules palpable in the left breast preceded a bilateral mastectomy.

Diagnoses Submitted.—Intraductal papillomas, 10; intraductal carcinoma, 6; papilloma, carcinomatous change, 2; adenosis and intraductal papilloma, 2; multiple duct papillomas, transitional cell type, 1; adenoma, lactating breast, benign, 1; adenocarcinoma, medullary type, 1; benign papillary cystadenoma, epithelial hyperplasia, 1.

Dr. A. P. Stout: The interesting thing in this case is to decide whether we are dealing with cancer or whether the lesion is benign. Of the diagnoses submitted 13 indicate a benign lesion and 9 malignant.

(Lantern slides.) I have to acknowledge that in lesions of the breast of this sort it is practically impossible to show the lesion in its entirety in one low power and one high power field. This is a lesion in which there are large and small intraductal papillary growths, also, a general hyperplasia of the breast tissue, including areas of fibrous adenosis and cystic disease. This is a picture which perhaps might be best described as a form of cystic disease with epithelial hyperplasia because I regard these microscopic intraductal papillary proliferations as probably not true tumors but simply the papillary form of hyperplasia. Perhaps, too, we ought to consider the large intraductal cystic papillary growths as simply an exaggerated form of hyperplasia; it is difficult to know whether or not they are truly neoplastic.

The great question, of course, is whether some of the papillary formations in the ducts have changed into carcinoma cells, or whether carcinoma cells are mixed with the benign cells. I think we will agree that a great amount of the benign form of hyperplasia is evident throughout the breast but there are areas, one of which is shown in this lantern slide, in which the papillary growth contains a great many of the rounded cells which are included in this area and which are enlarged here. Now, are these cancer cells or not? I notice this photograph was taken with a little bulge at this point, probably to excite discussion as to whether or not invasion is represented. I did not see any evidence of true invasion. I think that a bulging appearance such as this can be the result of distortion from the contraction of fibrous tissue. Indeed, groups of these cells could get pinched off and lie in a dense mass of scar tissue quite separate from the duct from which the growth sprang. I always discount such areas and do not consider them evidence of invasion unless there is absolute proof of invasion or unless the cells are characteristic of cancer. However, if there is a question of invasion, I always look over the whole slide to see if some of the suggestive cells without any scar tissue around them are proliferating between the fat cells. That is a reliable lead to the diagnosis of cancer which I have found useful occasionally in instances in which I had the greatest difficulty in making up my mind about a questionable malignancy.

There is another feature that I do not think is shown in the sections which were sent to you. In a section sent to me could be seen areas where the acini were lined in part by normal acinar cells and in part by the big cells which you see here. Now, the question is still not answered. Is this cancer? Foote and Stewart[4] in an article on tumors of the breast and forms of carcinoma of the breast used the term "lobular carcinoma, noninvasive type." As far as I can determine from the description and pictures, they referred to a lesion such as we have here; that is, here are possibly carcinoma cells; they are also present in some of the acini but at no place in the breast. Stewart has made a statement about such cases with which I cannot agree (I am not sure it is in that article, but it is in the fascicle on tumors of the breast which he has written for the "Atlas of Tumor Pathology"), namely, that it is not necessary to do a radical mastectomy for noninvasive lobular carcinoma. I think that is a dangerous statement; I do not see how you can be certain from a biopsy that the lesion is noninvasive since all parts of the growth cannot be examined.

As to the diagnosis of this case, I am on the fence. These cells are not particularly anaplastic. It is true that they are much larger than the normal lining cells of the ducts. There are some mitoses, but I think you would expect mitoses from such an actively proliferative lesion as is here. I felt at one moment that the lesion ought to be diagnosed intraductal carcinoma with cancerization of the acini because I recognized an intraductal carcinoma which involved acini either in multiple focal areas or by extension from the

ductules. But doubt of the validity of the diagnosis of carcinoma is sufficiently great in my mind to inhibit me from advising radical mastectomy, which I would do if I were convinced it was carcinoma. I would probably fall back on that old dodge of saying, "I had better get some more of this tissue and take some more sections," a delaying game which gives you time to try and make up your mind and a hope, usually vain, that the further sections will reveal something. So the diagnosis I shall make on this will be cystic disease with marked hyperplasia with microscopic intraductal papillary tumors and questionable carcinoma.

Dr. P. T. Flynn, Austin: What therapy would you advise in this case?

Dr. A. P. Stout: Since I am unable to make a definite diagnosis of carcinoma, I do not think I would advise a radical mastectomy. Dr. Severance, do you recall whether this young woman had had a familial history of breast cancer?

Dr. A. O. Severance, San Antonio: It was not given in the history.

Dr. A. P. Stout: I would be influenced by the history because if this woman had a mother or a maternal aunt or a maternal grandmother or sisters who had had cancers of the breast, she would stand a chance five times greater of developing cancer than a patient who did not have such a history. I think the history in this case would suggest a complete, simple mastectomy. Nobody could criticize that procedure, and I think it also would be permissible not to give any further treatment but to follow the case.

CYSTIC DISEASE AND ADENOSIS OF BREAST

CASE 3.—Contributed by Dr. B. F. Stout and Dr. D. A. Todd, Nix Hospital Laboratories, San Antonio.

Patient.—36 year old white woman.

Specimen.—Breast tumor.

History.—A routine physical checkup revealed a rounded, diffuse, firm mass in the upper quadrants of the right breast which had been present for three months. The excised mass was 4 by 3.5 by 2 cm. and upon section showed interlacing strands of firm gray tissue honeycombed with a mottled fatty and gray-white tissue. Axillary glands were not palpable. The left breast was normal.

Diagnoses Submitted.—Chronic cystic mastitis with sclerosing adenosis, 9; adenosis, 4; sclerosing adenomatosis, 3; chronic cystic mastitis, 3; chronic cystic mastitis with epithelial hyperplasia, 2; sclerosing adenosis, intraductal papilloma, 2; intraductal papillomas, 2; adenocarcinoma, 2.

Dr. A. P. Stout: Only two want to call this one carcinoma; the rest are for some variant of a benign lesion.

(Lantern slides.) I saw no evidence of carcinoma in this and I agree with the diagnosis of cystic disease and adenosis, fibroadenosis, or fibrous adenosis, whichever you want to call it. I think this slide is an excellent example of the distortion of ductules and acini by the proliferation of fibrous tissue around and among them. Here, for instance, there is not much disarrangement; here there is a little more; and over here you see nicely an area at which you might ask yourself, "Am I looking at invasive carcinoma?" because of the complete lack of normal arrangement and the piling up of cells in the ductules and acini. But here, not any one of the cells resembles a cancer cell, and that is the conclusive factor. I am not willing to call a lesion a carcinoma, no matter how disorganized it may be, unless the cells have the definite characteristics of cancer. In this case I saw nothing in any of the sections which remotely resembled the anaplastic appearance of a cancer cell. In the preceding case the large cells were questionable. They were not sufficiently anaplastic to convince me but were strongly suspicious.

Dr. Marvin D. Bell, Dallas: Are studies of smears from discharging nipples of enough value to be useful in these questionable tumors of the breast?

Dr. A. P. Stout: We have not examined such smears with the regularity that has been done here in San Antonio, for instance on the patients of Dr. Dudley Jackson. We have seen cancer cells in smears but in every case in which they were found, there was clinical evidence of cancer. I certainly would not be willing to rely on a smear diagnosis in a breast when the biopsy is relatively easy and much more conclusive. We only take smears, by the way, when there is a discharge from the nipple. We do not milk the nipple to try to get material out of it because we are afraid that somebody not particularly skillful may transfer his milking motions to the breast itself and possibly massage a cancer. We have an extreme objection to massaging cancers. I might ask Dr. Severance, who has had a whole lot of experience with Dr. Jackson, what he believes about the study of nipple secretions.

Dr. A. O. Severance, San Antonio: I think I ought to pass that buck to Dr. Todd, who has taken over so well the work of Dr. Jackson since I left. When I was there, I looked at a lot of nipple secretions in which I thought I could detect tumor cells; when Dr. Jackson followed up such cases with surgery, he usually would find a benign papilloma. In 3 of 5 instances in which I thought I saw cancer cells I was right. Anyway, I think such studies are useful at least to find a lesion which is perhaps worthy of the surgeon's search and removal, even though it is cancer in only a rare instance. Do you still rely on fibrous septums in a duct papilloma as a criterion for calling a lesion benign, or is this observation only partly useful?

Dr. A. P. Stout: It is a broken reed to lean on. I was guilty of offering that statement, I think probably in the first seminar here, as a criterion for sorting out benign from malignant papillary growths. I retract it completely. It is not reliable because we have seen carcinomas and papillary carcinomas that have had fibrous septums supporting their cells and have failed to see such septums in small, microscopic papillary tumors that were entirely benign. I have pinned my hopes on being able to recognize the difference between a cancer cell and a noncancer cell.

Dr. May Owen, Fort Worth: Do you advise radical mastectomy if the lesion appears to be intraductal carcinoma with no invasion?

Dr. A. P. Stout: If I am willing to make a diagnosis of carcinoma without a question mark, the treatment is radical mastectomy whether or not there is invasion for the reason that I gave in discussing Dr. Stewart's lobular carcinoma. Just because you do not see invasion is no guarantee that it may not be present. You cannot take that chance, in my opinion.

Dr. Owen: Do you recognize an entity "adenocystic disease" as distinguished from fibrocystic disease? If so, how do the two differ and what are the connotations as to treatment?

Dr. A. P. Stout: I do not recognize a difference. I think all these names are applied to variations of the same disease, which is atypical proliferative activity in the mammary gland, probably hormonally induced.

Dr. C. T. Ashworth, Fort Worth: What is the most satisfactory way you have found to demonstrate intraductal papillomas in the case of the bleeding nipple without a palpable mass? I refer to the gross examination of the breast after mastectomy.

Dr. A. P. Stout: I cannot answer that because we do not treat papillary tumors by mastectomy. I can only tell you how we try to demonstrate the lesion clinically, which is the examination of the specimen still *in situ*. In case of bleeding from the nipple, the examination of the breast is carried out in the ordinary fashion to see if a nodule can be felt. If no nodule can be felt, the breast is carefully palpated by finger-tip palpation all around the clock, around the areola. In this way sometimes a drop of fluid from a duct is sufficient to indicate the sector involved. If that fails, sometimes we can palpate a dilated duct which feels like a short link of sausage and is harder than the other ducts surrounding it. That, too, is sufficient to satisfy us whether or not at the time a drop of fluid can be elicited from the duct. If all these methods fail, we generally ask the patient to return until eventually, as a rule, the sector involved can be demonstrated. However, if that still fails, Haagensen is usually in favor of removing the breast tissue from beneath the nipple, because it has been demonstrated clinically that cutting all the ducts to the nipple does not interfere with subsequent successful lactation. Evidently they must regenerate.

Dr. M. C. Wheelock, Chicago: Do you think there is any benefit to be derived from the classification of duct papillomas as Saphir is now doing?

Dr. A. P. Stout: I cannot answer that question. I have told the criterion that I try to apply: that is, to try to decide whether or not the cells are cancer cells. I might tell you, incidentally, that so far in a gross papillary tumor of the mammary gland, I have never found what I considered indisputable evidence of the concurrent existence of benign papillary growth and malignant papillary growth in the same tumor. Once I saw the conditions in a carcinoma of the sweat glands in the outer part of the axilla, but that is the only time I have seen it.

Dr. J. J. Andujar, Fort Worth: For sclerosing adenosis observed in a biopsy, do you recommend simple mastectomy?

Dr. A. P. Stout: Decidedly not. Sclerosing adenosis, in my opinion, is no more a precancerous lesion than is cystic disease, and cystic disease in general is unproved as a precancerous lesion.

Dr. P. T. Flynn, Austin: What treatment do you advise in multiple papillomas in a woman in her thirties?

Dr. A. P. Stout: What have you done to prove that she has multiple papillomas?

Dr. Flynn: The woman had a biopsy specimen that showed multiple papillomas.

Dr. A. P. Stout: I would do nothing. Do you mean if one gross papilloma can be seen in a partial mastectomy, let us say, should a complete simple mastectomy be performed because several other microscopic papillomas are found in the portion of the breast removed? My answer is "no." I would not do the simple mastectomy because of the experience we have had after such cases in which a microscopic papilloma was present, either in the nipple zone or at a distance. Three of the patients who were followed had new papillary tumors develop; they were also removed locally, and not any of these patients has developed cancer after a long period. Therefore, unless there is some compelling reason for doing so, I do not think a simple mastectomy is necessary.

Dr. H. W. Neidhart, Beaumont: Is any significance attached to the presence or absence of a fibrovascular core in an intraductal papilloma?

Dr. A. P. Stout: I think that practically all intraductal papillomas have fibrovascular cores holding the cells together. Therefore, I think I have answered this

question when I replied to Dr. Severance's query, "Is there any virtue in the presence of a fibrous framework for the intraductal tumor as a guide to malignancy or nonmalignancy?" I would say it is not any guide, and I would not attach any undue importance to it.

GLOMUS TUMOR

CASE 4.—Contributed by Col. C. J. Lind, Brooke General Hospital, Fort Sam Houston:

Patient.—20 year old white man.

Specimen.—Tumor of the right thigh.

History.—This patient gave a history of a mass in the subcutaneous tissues of the right thigh for from five to six years. The mass had increased in size the past few months.

Diagnoses Submitted.—Hemangioma, 9; glomus tumor, 7; hemangioendothelioma, 3; hemangiopericytoma, 2; sweat gland adenoma, 1; arteriovenous aneurysm, 1; synovioma, malignant, 1; synovial sarcoma, 1.

Dr. A. P. Stout: (Lantern slides.) To me this was an obvious vascular tumor, and in this lantern slide picture it is characterized by the wide spaces that wander around in the tissue. Many of them do not contain red blood cells but a number do. These vessels are lined with normal appearing endothelial cells in most instances; they have in their walls rounded cells. Between the vessels is a fibrous type of stroma. This is a picture entirely characteristic of the glomus tumor, and especially characteristic of the glomus tumor which develops away from the nail bed. Masson calls this the vascular type of glomus tumor in contradistinction to the more common form in the nail bed, which is also vascular but which has relatively fewer vessels; he calls the latter a paucivascular form of glomus tumor but both forms are basically vascular tumors. They have these cells in greater or fewer numbers piled up in the wall. Sometimes there is also smooth muscle in the wall. In addition, especially in the subungual tumors, if the walls are impregnated with silver, a great number of neurits can be seen in the tissue spaces between the vessels with their surrounding cells.

HEMANGIOPERICYTOMA

CASE 5.—Contributed by Dr. B. F. Stout and Dr. D. A. Todd, Nix Hospital Laboratories, San Antonio.

Patient.—61 year old white man.

Specimen.—Tumor of the right thigh.

History.—Because of fifteen years of intractable pain in the right thigh, the patient walked on crutches with a resultant marked muscular atrophy of the right lower extremity. At operation a firm, encapsulated tumor 18 by 11 by 6 mm. was found lying against the periosteum in the middle third of the femur, occupying a space between muscle sheaths. On section, the tumor was gray with a central dark brown blood clot.

Diagnoses Submitted.—Hemangiopericytoma, 9; hemangioendothelioma, 6; glomus tumor, 5; hemangioma, 1; glomangioma, 1; angiosarcoma, 1; neurogenic tumor, benign, 1.

Dr. A. P. Stout: Here all but one have said some variety of a vascular tumor: either a glomus tumor, a simple hemangioma, a tumor featuring endothelial cells, or a hemangiopericytoma. We have one diagnosis of a malignant vascular tumor.

(Lantern slides.) This tumor was of great interest to me because it is made up of vessels which are not easily detected and yet which definitely are present. They are shown nicely in this lantern slide. The vascular lumen is small. There is a great heaping up of cells surrounding the lumen and almost tending to make whorls of cells. We do not see in these illustrations, which are characteristic of most of the tumor, anything that is strictly comparable to the picture in case 4, in which there was an organized arrangement. Still, it is a tumor with a definite formation.

Probably not all of you are familiar with my ideas about the nature of the glomus cell. From studies made in transplanting glomus tumor in vitro, Margaret Murray[12] showed that glomus cells had the exact characteristics of cells which cover the surface of capillaries and which were called pericytes by Zimmermann. These cells in ordinary stains are not detectable, so far as I can determine, but if their very long processes are impregnated with silver, it can be observed that a long arm extends along the capillary with side arms coming off at right angles and wrapping around the circumference of the capillary outside its reticulin sheath. The belief is that they are cells which govern the size of the lumen of the capillary, enabling it to constrict or enlarge. While in the glomus tumor these pericytes are always rounded cells, one sometimes finds tumors like this in which cells collected around capillaries somewhat resemble glomus cells but are not quite like them. They are variants which do not have the organoid arrangement of the glomus tumor. Moreover, this tumor shows some degree of infiltration, which the tumor in case 4 did not. It is my belief that the cells in this tumor are variations of the pericyte because the pericyte apparently can assume many different guises. It is probably related to the smooth muscle cell, although it never has any myofibrils in it. However, there are tumors varying all the way from a close resemblance to a venous hemangioma, at one end of the scale, to the differentiated organized glomus tumor at the other. Since it is my belief that the cells which feature this tumor are pericytes, I have suggested that the tumor be called hemangiopericytoma. This tumor interested me especially because it showed a close linkage to the glomus tumor. In the slide which I examined there were some areas in which the approach to the appearance of an ordinary glomus tumor was much more striking than you can see here.

These are characteristics of the tumor in general, but not of every part of it; therefore, I would regard this tumor as a transitional form between the glomus

tumor of organized type and the hemangiopericytoma. Whether you elect to use the term glomus tumor or hemangiopericytoma would seem to me not too important. If we want to restrict the term glomus tumor to those tumors which are always encapsulated, then the lesion would have to be called a hemangiopericytoma because it was not an encapsulated tumor.

The question arises, are any of these tumors malignant? So far as I know the encapsulated, organized, fully differentiated glomus tumor is not malignant; it is benign. In the hemangiopericytoma in its various manifestations, I have found 6 or 7 cases that metastasized. I would say that the metastatic rate might be estimated for the hemangiopericytoma as approximately 20 per cent. However, I am sorry that I cannot give you a criterion for telling when a hemangiopericytoma is malignant and when it is benign. Those that have metastasized did not have any detectable features which would enable me to say, "This, I can predict, will be the metastasizing kind of hemangiopericytoma." These tumors, of course, are uncommon.

I am sure that everyone present can recognize the characteristic glomus tumor with ease, especially if it is subungual. I can understand that one is sometimes nonplused when the growth is away from the nail bed and occupies a position in the subcutaneous tissue of the thigh, as in this case. We are slowly accumulating information about glomus tumors which seems to indicate that they may occur almost any place. I have had the good fortune to accumulate case reports of 3 entirely characteristic glomus tumors of the stomach and hope to publish them before long. I was interested to notice recently a report of a glomus tumor of the mediastinum.

Dr. H. W. Neidhart, Beaumont: Is there any difference between Zimmermann's pericyte and the Rouget cell, which is also called a pericyte?

Dr. A. P. Stout: I presume there is not. My understanding is that Rouget described his cells in animals and Zimmermann in human beings. I presume that the terms are probably synonymous.

MALIGNANT MELANOMA

CASE 6.—Contributed by Dr. B. F. Stout and Dr. D. A. Todd, Nix Hospital Laboratories, San Antonio.

Patient.—10 year old Latin-American boy.

Specimen.—Submental tumor.

History.—The patient had a small subcutaneous tumor of the submental area in midline. This mass was slowly growing but had no known date of onset. The excised tumor was the size of a pigeon's egg, encapsulated and solid. A mole had been removed from this patient's chin at the age of 2 years.

Diagnoses Submitted.—Malignant melanoma, 15; hemangioendothelioma, 3; angiosarcoma, 3; melanoma, juvenile, benign, 1; hemangiopericytoma, 1; carcinoma, salivary gland, 1.

Dr. A. P. Stout: The majority, I see, considered it a malignant melanoma, 1 a benign melanotic tumor, 1 a carcinoma of the salivary gland, and the others variations in vascular tumors. Quite a great deal of unanimity.

(Lantern slides.) You will recall that in the sections is shown a tumor that in some places is made up of rounded cells, and in others of spindle-shaped cells; you see some of the latter cells in the high power lantern slide. These cells grow in cords. There is some indication of these cords in the low power picture; you can see a septum separating the cells into groups, which I think is an important feature. It made me strongly suspect a malignant melanoma in this case. A silver stain blackened the melanin, and you have a picture of that. In some cells blackened by the ammoniacal silver are fine, intracellular granules which by close study can be detected in the hematoxylin and eosin preparations. Moreover, these fine granules are nonrefractile, which would seem to indicate that they were not hemosiderin; the fact that they are blackened by silver confirms the diagnosis of melanin. The fineness of the granules indicates that the melanin is in a melanoblast because phagocyted melanin is generally in larger lumps of varying sizes.

This patient is a 10 year old boy and the mass in the submental region appears to be a lymph node; moreover, a mole was removed from the patient's chin at the age of 2 years. This history raises the interesting question of a metastatic malignant melanoma arising in a child before puberty. We do not know definitely, of course, that the 10 year old boy was prepubertal, and it would be probably important to know whether he showed any evidence of secondary sexual characteristics before stating definitely that the metastasis had occurred before puberty. It is possible, however, that it has done so because puberty often does not begin until after the tenth year. The reason for making this point is that it is probably well known that malignant melanomas in children before puberty are much less malignant as a class than similar tumors after puberty.

I have seen only 2 patients in whom malignant melanomas developed before puberty and metastasized. One was an 8 year old girl who had metastases in the supraclavicular and the axillary lymph nodes from a tumor of the deltoid region. The tumor was removed when the girl was 8 years of age and the metastases were not removed until three years later. This girl, the last I heard of her, at the age of 20, had married and was without any evidence of recurrence. Of course, that does not prove that metastasis may not appear sometime later, because we are all aware of the occasional bizarre behavior of malignant melanoma to metastasize at a very late date.

The other case that I saw was in a much younger

girl, 3 or 4 years old, who had a tumor on the skin surface of the cheek. Strangely enough, it metastasized to the subcutaneous tissue near the angle of the jaw. I do not know what happened to this girl. She was a private patient, and after the metastasis was removed and it was proposed to remove the lymph nodes of the region, the parents were alarmed and took her elsewhere. It is well known, of course, that such lesions seldom metastasize and when metastasis occurs the tumors do not seem to be fatal nearly as often as in adults.

You might be interested to learn that I looked to see how many cases of malignant melanoma in which the primary site of the tumor was never discovered were on record in the Laboratory of Surgical Pathology at Columbia. There were 80, which really astonished me. The metastases were found in lymph nodes in 39; subcutaneous tissue and skin in 27; intestine in 6; lung and pleura in 3; and the liver, salivary gland, tongue, bone, and brain in 1 each. It is indeed a bizarre form of tumor.

Dr. J. H. Childers, Galveston: In regard to the 80 cases of the metastatic melanoma without discovery of primary lesion, how many total cases were studied?

Dr. A. P. Stout: I am sorry that I did not count our total number of cases.* When there were about 150 malignant melanomas, my recollection is that 20 of them were from undiscovered sites. My memory may be at fault, but I think that that was the proportion. Whether we now have accumulated a disproportionate number of cases of unknown origin, I cannot say. I would think, though, that 80 cases is a high proportion for any one clinic to have. The reason for this large number is that I get a great many puzzles to untangle, including nodules and lymph nodes with tumors which are difficult to diagnose; a good many of the 80 were in that group.

Dr. A. O. Severance, San Antonio: Do malignant melanomas ever produce glandlike structures?

Dr. A. P. Stout: I have never seen them do so. I could conceive of pseudoglandular appearances being produced, but I have never seen a malignant melanoma produce glands. Have you, Dr. Severance?

Dr. Severance: Dr. L. V. Ackerman showed us one such case at Columbia that I thought you had accepted.

Dr. A. P. Stout: Did we agree that there were definite glands?

Dr. Severance: Yes, sir.

Dr. A. P. Stout: Well, I had forgotten it, showing that senility is setting in. However, that must have been a unique case.

**A count of the malignant melanomas recorded in the Laboratory of Surgical Pathology of Columbia University as of January 2, 1951, showed 644 cases. In 82 of these the primary site is recorded as unknown.*

XANTHOGRANULOMA OF KIDNEY

CASE 7.—Contributed by Dr. J. M. Moore, Santa Rosa Hospital, San Antonio.

Patient.—43 year old white woman.

Specimen.—Left kidney.

History.—The patient had pain for ten months, ranging from the left costovertebral angle downward toward the bladder. Pyuria was noted from the left ureter only. A roentgenogram showed multiple calculi in the left kidney. The left kidney was removed surgically.

Diagnoses Submitted.—Chronic pyelonephritis, 9; plasma cell myeloma, 6; tuberculosis of the kidney, 2; papillary necrosis, 2; chronic granuloma (gumma?), 1; granulomatous process with plasma cells, pseudoxanthoma cells, 1; renal cell carcinoma with chronic pyelonephritis, 1; malacoplakia of kidney pelvis, 2.

Dr. A. P. Stout: (Lantern slides.) In this case you may recall a diffuse form of infiltration of the kidney pelvic region and the kidney itself. At first sight the slide was exceedingly confusing, but after looking around awhile, you probably were impressed by the large number of vacuolated cells. They are gathered in some areas in great numbers; in other areas they are fewer. The scarlet red stain shows that the material in them stains red and is presumably lipoid.

I saw no evidence of tumor in this case and thought that it was altogether an inflammation producing a granulomatous infiltration of the pelvis with a marked amount of lipoid, probably cholesterol because the clefts were indicative of the former presence of cholesterol crystals in several areas. In addition, there were these foam cells which we may suppose contained the cholesterol in the soluble ester form. I did not think that any of the foamy cells were tumor cells but that they were altogether phagocytic. This, then, is a kind of xanthic granulomatous process which in my opinion is not uncommon in the kidney. Of course, in this instance it is associated with a suppurative pyelonephritis, and there are stones as well.

I would like to call this lesion xanthogranuloma. In an article by Farrow, Cross, Tannhauser, and Andrews called "Renal Lipomatosis,"[3] they suggested that these cases of lipoid granulomatosis, the name they applied to this condition, possibly represent early stages in renal lipomatosis or partial replacement of the kidney by fat. I hesitate to accept that interpretation but it may be correct. It seemed to me that the basis for such an interpretation was the varying amounts of fat in or around such kidneys, and I did not think that it had been proved beyond question that there were definite transitional stages between the two processes. However, I believe that this xanthogranuloma of the kidney is an entity, that it can simulate the appearance of a neoplasm, but that actually it is not a neoplasm at all but a granulomatous process.

Dr. C. T. Ashworth, Fort Worth: Could this lesion in the kidney be considered similar to "plasma cell mastitis?"

Dr. A. P. Stout: I think possibly. Plasma cell mastitis, I believe, is a poor term because the same process in the breast is sometimes marked by many plasma cells and at other times with hardly any plasma cells. To me the condition is a special form of mastitis in which exudate and debris collect in the ducts and escape through defects in the walls of the ducts into the stroma of the breast. There the material sets up a violent inflammatory response, usually also accompanied by a good many phagocytic cells, both mononuclear and multinuclear. I suppose similar circumstances might explain this lesion in the kidney but I really have not given the subject enough study to warrant making any definite statements. It might be a good lead to investigate along these lines.

Dr. J. J. Andujar, Fort Worth: Please comment on the term "malacoplakia."

Dr. A. P. Stout: Malacoplakia is a peculiar granulomatous lesion which is most commonly found in the bladder but which may ascend to the ureters and also involve the kidney pelvis. It is characterized by an inflammatory infiltrate, making lumps in the mucous membrane of the bladder by cells which contain acidophilic granules and which can lead the unwary into suspecting that the lesion might be a granular cell myoblastoma. But most important in diagnosis, the tumor contains small rounded bodies that you might suspect were parasitic but which contain usually both calcium and hemosiderin. How these bodies get there and why they form is unknown to me, but they are the cells diagnostic of malacoplakia. Malacoplakia is a granulomatous lesion. These bodies are not parasites and they have no clinical importance at all. They are just pathologic curiosities which are convenient in the diagnosis, once you have seen them.

I understand that some saw objects which they thought were suggestive of the bodies of malacoplakia in the tissue around the pelvis in this kidney. I did not detect them and certainly there were not very many of them. Dr. Severance, did you see those bodies? Will you describe them and defend your opinion?

Dr. A. O. Severance, San Antonio: There is no defense because the bodies were pink instead of blue. I did not know whether the stain was at fault or whether it was my vision but they varied in size and were round. They did not have a lamellated appearance but were solid and ranged from pink to purple. Colonel Richmond and I saw them but I do not think they show in the photograph. Apparently they were not the real thing.

Dr. A. P. Stout: My experience with malacoplakia is limited to 1 case, so I cannot be regarded as an authority.

Dr. H. W. Neidhart, Beaumont: Are the calculi, chronic pyelonephritis, and pyuria incidental to the granuloma?

Dr. A. P. Stout: I presume that the granulomatous process is secondary to the chronic pyelonephritis and calculi. That was the way I interpreted it.

Dr. Melba M. Moore, Seguin: Do you believe that the clear cells in so-called clear cell adenocarcinoma of the kidney are a result of fatty degeneration?

Dr. A. P. Stout: No, I think they are not the cells of degeneration.

Dr. T. P. Churchill, Amarillo: Were cultures made on the patient with pyelonephritis?

Dr. J. M. Moore, San Antonio: No.

CARCINOSARCOMA OF VOCAL CORD

CASE 8.—Contributed by Dr. J. M. Moore, Santa Rosa Hospital, San Antonio.

Patient.—60 year old Latin-American man.

Specimen.—Tumor of the vocal cord.

History.—The patient gave a history of hoarseness for years which had become more severe in the preceding few days. No respiratory difficulties were noted until just before surgery. There were no palpable nodes and a chest roentgenogram was negative. The larynx and epiglottis were removed. A tumor 3 cm. in diameter was found lying between the vocal cords. The laryngeal wall was not involved grossly.

Diagnoses Submitted.—Squamous cell carcinoma, 12; fibroplastic squamous cell carcinoma, 1; carcinosarcoma, 4; epidermoid carcinoma, 2; ganglioneuroma, 2; malignant teratoma, 1; malignant mixed tumor, 1; fibroma with epithelial metaplasia, 1.

Dr. A. P. Stout: Fibroplastic squamous cell cancer, carcinosarcoma, epidermoid carcinoma are much the same. Seven regard the lesion as some kind of a mixed tumor and the others as squamous cancer, except the 2 for ganglioneuroma.

(Lantern slides.) I think it must have been apparent to all of you that the small nests of epithelial cells in this lantern slide show definite epidermoid differentiation and have the appearance of cancer cells. These nests of cells are set in a tissue that appears largely fibroblastic and contains a great many rather bizarre cells which show many mitoses. Here is a mitosis in one of these stromal cells, if we want to call this stroma. I think that the malignant appearance of both the stroma and the epithelial elements is striking. Obviously, this is an unusual tumor because a squamous cell cancer of the larynx is not expected to show such a tremendous amount of apparently neoplastic stroma.

I had never seen a tumor like this in the larynx and was much edified. However, I have seen similar tu-

mors in the esophagus and nasal cavity. The esophageal case was reported in 1949 by Humphreys, Rottenberg, and me.[23] It was a large pedunculated tumor which projected into the lumen of the lower half of the esophagus. The tumor did not invade the wall and was made up of groups of epithelial cells, although not squamous ones, and a stroma much like this or perhaps even more sarcomatous in appearance. In that tumor we thought we saw suggestions of rhabdomyoblasts. Several people, I think, have seen suggestions of rhabdomyoblasts in the stromal elements here. I do not question that they may indeed be rhabdomyoblasts, although I could not find any cross striations or any longitudinally disposed myofibrils and therefore I felt some hesitancy about it.

This tumor in the esophagus was removed by partial esophagectomy. We thought that it might be cured because there was no invasion even of the submucosa, but not long afterward there was a local recurrence, which was hard to understand. Metastases also recurred in the mediastinal lymph nodes, and in spite of a second attempt at removal the patient eventually died. At autopsy there were found further lymph node metastases in the neck but nowhere else. This tumor in the literature has generally been called a carcinosarcoma and we used the same term because it had been most frequently used before. Whether such tumors arise from a single cell type and the other tissue contained in them represents metaplasia or whether the growth is teratomatous, I do not know. I am sure that it must be an extremely rare form of tumor.

I am not acquainted with any other similar case of carcinosarcoma in the larynx but the lesion in this slide is so much like the tumor in the esophagus and another in the nasal cavity that I believe it is also a carcinosarcoma. By the way, the tumor in the nasal cavity came from Havana. As I recall, the growth was excised and after about two years had not recurred. I have had no further information about it. I know, however, that our esophageal tumor was malignant, as were nearly all of the similar cases reported.

Do we have any discussion of this lesion? Probably it is too rare for anybody to have seen anything like it. Has anybody seen any tumor like that in the larynx?

Dr. W. O. Russell, Houston: We had one recently at the Anderson Hospital in Houston. It was growing apparently as a squamous carcinoma in many places but more like a fibrosarcoma in others. Biopsy specimens were taken in two areas but the nature of the basic malignancy was confusing.

Dr. A. P. Stout: In the large esophageal tumor on which we reported we could find areas in which there were no epithelial elements. If a biopsy specimen were taken from such an area, the examiner might be completely deceived as to the true nature of the tumor.

Audience Member: What is your term for this tumor?

Dr. A. P. Stout: Since in the tumor of the esophagus the term carcinosarcoma was used and the majority of those who have written about the lesion have used the same term, I simply followed their lead because I have no strong convictions about it. I do not like to suggest a new term unless I am convinced it is needed. I think it just adds confusion to do so.

Dr. Robert Lyons, Wichita Falls: Did you study any metastases in your esophageal case? If so, what type of tissues appeared therein?

Dr. A. P. Stout: One would anticipate that it would probably be the carcinomatous elements, but strange to say, the sarcomatous elements alone appeared in the metastases.[23]

MESOTHELIOMA OF PLEURA

CASE 9.—Contributed by Dr. A. O. Severance, Baptist Memorial Hospital, San Antonio.

Patient.—69 year old white woman.

Specimen.—Chest tumor.

History.—Routine and follow-up roentgen studies revealed an almond-shaped tumor attached to the visceral surface of the right lung. There were no symptoms, and physical examination and laboratory findings were within normal limits. At surgery a pedunculated tumor 4.5 by 4.5 by 1.5 cm. was found attached to the midportion of the upper lobe of the right lung. The tumor was encapsulated, flattened, and mushroom-shaped, with a few projecting surface nodules. The cut surface was gray, firm, homogeneous, and fibrous-like, and the tumor was cut with increased resistance.

Diagnoses Submitted.—Mesothelioma of pleura, 10; fibroma of the pleura, 7; fibroma durum of the pleura, 1; fibrous mesothelioma, 3; localized fibrous mesothelioma, 2; sclerosing hemangioma, 2.

Dr. A. P. Stout: Localized fibrous mesothelioma, I would take it, is much the same as fibrous mesothelioma. I must confess that it astonishes me to see so many diagnoses of mesothelioma.

(Lantern slides.) In this case we have a tumor that is sharply circumscribed, covered here by pleura, and at this point separated from the pleura by a little layer of fibrous tissue. As we look at the tumor in hematoxylin and eosin and in trichrome stains, we are perhaps impressed at first by the large quantity of connective tissue in it which is strikingly fibrous. The cells in some places look like ordinary fibroblasts; elsewhere they seem to be more rounded cells of less distinctive type. If you look at the tumor in its different parts, you cannot select any one area which is characteristic of the whole tumor. We do not see any interlacing of cells and fibers such as characterizes the ordinary fibroma, at least in most areas, but see these

rounded and atypical looking cells which are not characteristic of the fibroma as I recognize it. Therefore, we are dealing with a tumor which is fibrous, yet which is characterized by having no characteristic pattern. I might add that some tumors similar to this are very vascular in some places, whereas, in other places vessels are almost entirely lacking. This slide with trichrome stain shows an area where the cells are not surrounded by connective tissue fibers. There are a few fibers scattered among the cells but no definite relationship. This emphasizes that the tumor is not characteristic of the ordinary fibroma or fibrosarcomas and that it has no characteristic pattern. Some of the spaces shown in the tumor are probably due to shrinkage. In any fibrous tumor the fibers are apt to shrink away from the cells and leave clefts which are confusing.

MESOTHELIOMA OF PLEURA

CASE 10.—Contributed by Col. C. J. Lind, Brooke General Hospital, Fort Sam Houston.

Patient.—51 year old white man.

Specimen.—Intrathoracic tumor.

History.—The patient gave a history of pneumonia three times in childhood and probable empyema at the age of 12. A roentgenogram after "influenza" at 47 years of age revealed an intrathoracic tumor. At surgery four years later a firm, nodular, oval mass 10.3 by 3.5 by 7.5 cm. with a thin, reddish brown capsule was found attached to the upper lobe of the right lung and lying in the right upper interlobar fissure. The cut surfaces revealed numerous gray-white, homogeneous masses from 0.1 to 4.5 cm. in diameter, interspersed with dark reddish brown fibrillary tissue.

Diagnoses Submitted.—Mesothelioma of the pleura, 9; mesothelioma of the pleura with hemangiopericytomatous features, 1; neurofibroma, 3; neurilemoma, 2; hemangioendothelioma, 2; fibrosarcoma of the pleura, 2; carcinoma of the lung, 1; metastatic carcinoma of the lung, 1; hamartoma, 1; echinococcus cyst, 1.

Dr. A. P. Stout: Here we have quite a difference of opinion. Note the single "m" in "neurilemoma." In spite of the publishers of all the journals in the United States, I have persuaded the National Research Council to take out that extra "m", so I have some august backing. I am not surprised to find considerable variation in opinions.

(Lantern slides.) Here, too, in the sections is a tumor which certainly is bizarre. There are a lot of spindle-shaped cells, others of indeterminate shape, then abruptly an area with very few cells. With the trichrome stain I think you can see a resemblance in this area to the last tumor considered. This area is quite cellular, with large plump cells and apparently closely put together. In another photograph is shown an area with many vessels, so I am not surprised to learn that some diagnoses suggested a vascular relationship. Here are thick-walled vessels with very small lumens and very thick walls. The variations in this tumor—and I saw a great many more sections from it than you—made a puzzling problem to interpret when I first saw it.

I think these two tumors (cases 9 and 10) are of the same type and that they are both solitary fibrous mesotheliomas and benign. The reason for my suggestion goes back to 1942, when a malignant solitary mesothelioma of the pleura implanted in vitro by Dr. Murray[22] grew a pure culture of mesothelial cells which were recognizable by their growth characteristics. Benign tumors of this nature, as both of these were, grow into the pleural space or into an interlobar fissure, either from the visceral or parietal pleura, and do not infiltrate. As far as is known from follow-ups on tumors of this sort (we have followed quite a number now), they have been cured by simple excisions.

The malignant solitary mesotheliomas do not project into the pleura but grow into the lung from a broad pleural attachment. Although sharply circumscribed microscopically, they infiltrate. They differ in appearance from benign growths in that they contain few connective tissue fibers so that in a section stained with hematoxylin and eosin you are hardly aware of these fibers but in reticulin stains, although delicate, they are easily seen. They tend to wrap around the spindle-shaped cells. The cells are anaplastic and show mitoses. These tumors are uniformly malignant, and I think that all of the ones we know about either have terminated fatally or, if the patient is still alive, have recurred.

From the literature on pleural tumors, of course, you are familiar with the diffuse mesothelioma, which like the diffuse peritoneal mesothelioma is made up of glandlike spaces lined by cells more or less resembling swollen normal mesothelial cells. The cells are surrounded by a stroma which either is fibrous or resembles fibrosarcoma. These tumors in the pleura, I think, are rare indeed. I certainly support Willis' attack[25] on the indiscriminate diagnosis of primary mesothelioma of the pleura of that type because the majority of such tumors at autopsy are observed to be metastatic tumors, generally from the lung, which, strangely enough, have grown in an ensheathing fashion. I believe, however, there are such primary tumors, extremely rare in the pleura, but not nearly so rare in the peritoneum. Thus, there are fibrous mesotheliomas which may be solitary or diffusely spreading and glandlike or mixed mesotheliomas in solitary or spreading forms, both varieties having benign and malignant variants. These comprise almost all the pleural tumors; any others are so rare as to be curiosities.

In the last year I have been astounded to find, that it is possible to have a diffuse fibrous mesothelioma looking like these tumors that you saw in the solitary form but spread over the surface of the lung and even

over the surface of the parietal pleura. Yet such a tumor appears benign and does not destroy the patient. I have also observed a solitary mesothelioma showing the characteristics of the diffuse type with the epithelial or mesothelial spaces. So, apparently there can be variations in all of the varieties of mesotheliomas which I have indicated.

Two reasons encouraged me to believe that these fibrous tumors are mesotheliomas. Probably the most important is that the Russian histologist Maximow[22] proved that the normal mesothelial cell in vitro can produce connective tissue fibers. The other reason is that whatever these fibrous tumors are, they are unlike fibrous tumors at any place in the body other than a mesothelial surface. I do not know whether or not the name "benign fibrous mesotheliomas" will be accepted, but whatever name is selected, I hope that only one term will be used because in my opinion they are definitely an entity with a behavior that can be predicted. In the literature can be found reports of them under about twelve different names. That illustrates the difficulties under which we labor. Uniformly, in all these reports the benign growths remained benign. Some of them were called fibrosarcomas and so on, but all the ones that were followed had a benign course.

Case 10 has already been reported by Alston and Paulson,[1] both formerly of Brooke General Hospital. I have to report that Dr. Alston had correctly diagnosed this tumor as a mesothelioma of the pleura and that I led him astray so that the case was reported as a mesenchymoma or mixed mesodermal tumor of the pleura. It was in 1946 that I first saw the specimen. I made the mistake in diagnosis because at the time I was not familiar with all of the variations that benign mesothelioma can assume. Since parts of this tumor were very vascular and other parts looked peculiar, I could only suppose that the tumor represented a growth of various kinds of mesenchymal tissues assuming different forms. Therefore, at my suggestion it was reported as a mesenchymoma of the pleura. I am sure, now that I have seen about 12 benign varieties of this neoplasm, that it is a variant of the benign fibrous mesotheliomas. Dr. Paulson, who operated, reports that four years after operation the patient was perfectly well without signs of recurrence.

Dr. M. D. Orrahood, St. Louis: How would you differentiate mesothelioma of the pericardium from a probable small cell carcinoma metastasizing to the pericardium?

Dr. A. P. Stout: To answer that question I would have to study the section to see what led to the belief that it was a metastatic carcinoma. I think metastatic carcinoma sometimes excites a fibrous proliferation around itself that can imitate the appearance of these solitary tumors. Of course, if that is the case, you might be led astray if the carcinoma cells were small and inconspicuous. I can only say that you have to keep constantly vigilant for such small cancer cells; just being aware of their possibility should keep you on the qui vive.[21, 22]

CYLINDROMATOUS CARCINOMA OF SALIVARY GLAND

CASE 11.—Contributed by Dr. S. W. Bohls and Dr. P. T. Flynn, Austin.

Patient.—59 year old white man.

Specimen.—Tumor, floor of mouth.

History.—Four months prior to surgery the patient noticed a mass beneath the chin and left ramus of the mandible which shortly afterward presented in the floor of the mouth. At surgery a soft, nontender mass projected into the buccal cavity along the inner aspect of the left alveolar ridge. The specimen was a circumscribed, apparently encapsulated mass 4 by 3 by 2 cm., homogeneously white, although one-third exhibited a papillary mucoid appearance.

Diagnoses Submitted.—Mixed tumor, salivary gland, 6; mixed tumor, 2; mucoepidermoid carcinoma, salivary gland, 5; mucoepidermoid tumor, salivary gland, 3; adenocarcinoma, cylindromatous type, salivary gland, 4; carcinoma, salivary gland, 1; adamantinoma, 3; adenoma, 2.

Dr. A. P. Stout: (Lantern slides.) On the left is a photomicrograph stained with hematoxylin and eosin, in the center a mucicarmine stain at relatively high power, and at the right a higher power view of a hematoxylin and eosin stain. The tumor certainly is primarily epithelial. It tends to grow and form rounded spaces, often several within one group of tumor cells. In other areas in the tumor there are many more such rounded spaces in a single group of cells. This, however, is a good area to have selected for study because it shows not only the rounded areas but also small, solid cords of tumor cells without such rounded spaces. The mucicarmine stain shows that the material in the spaces is tinted by the mucicarmine and therefore may be mucin. I think the photograph which you see on the right was probably taken to plague me to explain the asteroid bodies in the middle. I presume shrinkage of the material made them assume that shape, but somebody perhaps has a better explanation. At any rate, I think the material in these spaces surrounded by the epithelial cells and secreted by them is probably mucin.

This tumor form in my opinion is characteristic of what is called a cylindromatous carcinoma of salivary glands and of the mucous and serous glands of the oral cavity and pharynx. Occasionally also, like the mixed tumors, the growth may be found in connection with sweat glands; however, I have seen only one such case and I believe it must be extraordinarily rare. The commonest place where these tumors are found is in the parotid gland. This one presumably arose

in the submaxillary gland, but plenty of them also arise in the oral cavity, preferably in the palate and more or less in the vicinity of the junction of the hard and soft palates. They do not form in the anterior part of the mucous membrane covering the hard palate because no mucous and serous glands are there.

The characteristics of this form of cancer—and it is a form of cancer—is its insidious, infiltrative growth which does not respect bone but can go right through it and often leaves little detectable trace of its passage in roentgenograms. That is a disturbing thing about the tumor. It metastasizes regularly to lymph nodes, sooner or later. Metastases may be found in the skin, the lungs, and indeed, almost any place in the body, but particularly in the lymph nodes and the lungs.

Athough this tumor is a glandular, mucus-secreting carcinoma, strangely enough it is somewhat radiosensitive and sometimes may disappear completely with radiotherapy. It is seldom, however, that the tumor remains "cured," if that term can be used in connection with disappearance from radiotherapy. It returns sooner or later, either locally or in metastases, and eventually destroys the patient. If surgical treatment is undertaken, again the tumor is a variety in which you must be ruthless in the removal of apparently uninvolved tissues around the periphery.

If in biopsy characteristic areas like this are obtained, the diagnosis is easy. However, I warn you that a superficial biopsy from such a tumor may show only the short cords of undifferentiated cancer cells without any of the characteristic cylindromatous formations which are so striking in most of this tumor. Nevertheless, if such cords are encountered in an infiltrating growth, the diagnosis of carcinoma should be made.

Another difficulty in the diagnosis sometimes arises when such cylindromatous areas are seen in the center of a mixed tumor. In my experience when a sharply circumscribed or encapsulated tumor shows the other characteristics of a mixed tumor but has areas of this cylindromatous type, it is not malignant but benign, just as benign as the mixed tumor. This criterion may not be completely reliable, but I do not know of any case that contradicts it and will be glad to hear from anybody who has. We are constantly trying to set reliable criteria for ourselves and frequently have to discard them because they prove not to be completely reliable.

In regard to these tumors elsewhere than in the oral cavity and salivary glands, I told you previously that I had seen only one such case arising from the sweat glands. You are probably aware that mixed tumors occurring in various parts of the body have the characteristics of mixed tumors of the salivary glands, and it has come to be believed that they arise from the sweat glands.

Unfortunately, the term "cylindroma" has also been applied by dermatopathologists to certain varieties of basal cell tumors which do not metastasize and which, in my opinion, do not have any relationship to these cylindromatous carcinomas of mucous and salivary glands. I would hope that the term "cylindroma" or cylindromatous tumor for this variant of basal cell carcinoma developing from sweat glands or skin could be dropped because it only serves to confuse.

Dr. A. O. Severance, San Antonio: Do cylindromas show squamous metaplasia as in this case? Will you point out the difference between cylindroma and mucoepidermoid carcinoma?

Dr. A. P. Stout: I think that any of these tumors on occasion may show squamous metaplasia but not very often. Because some squamous metaplasia is found in this case, I do not believe that the diagnosis is invalidated. The tumor of salivary glands and mucous and serous glands of the oral cavity, to which the term "mucoepidermoid carcinoma" was given by Stewart[15] is, I believe, an entirely different tumor from the cylindroma and can be recognized generally without much difficulty. It is a tumor that is derived from the duct cells either of the salivary glands or the mucous and serous glands of the oral cavity, and the epithelial cells of the duct form both mucous-secreting cells and squamous epidermoid cells in juxtaposition. There is a certain amount of variation in the proportions of these two different varieties, but I think both of them should be present in order to make that diagnosis. Generally you will find this type of growth inside recognizable ducts, but because the tumor is malignant, it also grows in the tissues outside the ducts and maintains these characteristics. However, I have never seen one with the cylindromatous formations that we see in this tumor.

Our experience with mucoepidermoid carcinoma has been that it is generally slow growing and is very slow to metastasize; metastasis may appear after ten or fifteen years. It is difficult, therefore, to talk about cures when no recurrence is noted for five or ten years. Stewart tells me he and his associates are revising their estimate of the malignancy of mucoepidermoid tumors, as in follow-up cases metastases have appeared a very long time after the primary growth was removed.

Foote is writing the fascicle on tumors of the salivary glands for the "Atlas of Tumor Pathology"; he is now reviewing more than a thousand cases and finding it difficult. I do not know when the fascicle will appear but hope it will help to clarify our ideas on an extremely difficult subject. I think there are at least eight different kinds of carcinomas of the salivary glands, each with a more or less characteristic

morphology. Such a wide variation is disconcerting and makes it difficult to learn how malignant each of the varieties will prove. No one sees many carcinomas of the salivary glands; therefore, if the lesions have to be divided into eight parts, very few can be classified in any one group.

Dr. W. W. Tribby, Memphis: Do you agree with Willis' idea that mixed tumors of the salivary glands are epithelial in origin?

Dr. A. P. Stout: That idea was first advanced, I believe, by Mason.[7] It was his opinion that such growths are tumors of salivary epithelium in which the cartilage-like material and the other elements that look like mesodermal structures are metaplastic proliferations of epithelial cells. I keep an open mind about this opinion because it is startling to think of epithelium making such obviously mesodermal structures. Yet I accept the idea as a hypothesis which I hope will be supported by more definite proof than is available at present.

BILATERAL INTERSTITIAL CELL TUMOR OF TESTIS

CASE 12.—Contributed by Dr. S. W. Bohls and Dr. P. T. Flynn, Austin.

Patient.—22 year old white man.

Specimen.—Testicular tumors (A, right testis; B, left testis).

History.—The right testis was removed in August, 1947, and contained a mottled grayish brown to yellow tumor 6 cm. in diameter, showing numerous calcified areas. Large doses of deep roentgen therapy were given to the retroperitoneal area. In March, 1950, left orchiectomy was performed for a rapidly growing testicular mass 3 by 1.5 by 1.5 cm. The cut section of the mass was greenish brown and made up of very small lobules. The capsule was not invaded.

Diagnoses Submitted.—Interstitial cell tumor, 16; interstitial cell carcinoma, 3; embryonal carcinoma, 4; adenocarcinoma, 3; seminoma, 1; chorioepithelioma, 2; adenoma, cells of Leydig, 2; adenomatoid tumor, 1; adrenal cortical rest, 1.

Dr. A. P. Stout: (Lantern slides.) The right testis tumor made up of cords of cells is nicely represented in this photomicrograph; some of the cells are tricornered, others rounded or polygonal, and some cylindrical. The cytoplasm is acidophilic but not strongly so. The photomicrograph shows vacuolation but does not show too well the granular nature of the cytoplasm of these cells. The reticulin impregnation shows the fibrous framework supporting these cells. It is obvious that the cells do not make connective tissue fibers but simply have a supporting framework.

In the illustrations of the left testis I think the cells in their grouping suggest much more the ordinary appearance of interstitial cells, and we can see the granules in them much more clearly. They have the same reticulin supportive framework as was present in the right testicle. So then, although not exactly the same (because on the left side the cylindrical cell formations were not present), these two tumors in the right and left testes, in my opinion, are of the same basic cellular type.

It seems to me almost certain that bilateral interstitial cell tumors are represented here, the first case of this kind that I have observed. We have recorded in our files 5 other accepted cases of interstitial cell tumors and 1 doubtful case which came from Professor Garpure of the Grant Medical School in Bombay. This last was a malignant, metastasizing growth which fungated through the scrotum in an adult male. The tumor was rejected as an interstitial cell tumor by Engle and was regarded as possibly an interstitial cell growth by Masson. Garpure sent the tumor to me and I submitted it to both Engle and Masson. Masson accepted it as possibly an interstitial cell tumor chiefly because he could not assign it to any other category—not too good a reason. Garpure had sent the growth to me hoping that I would engineer publication of the case in some American medical journal. Since it was a questionable case, I felt unable to sponsor it. It will appear eventually, I believe, in the *Journal of Pathology and Bacteriology.*

All the other cases were characteristic. One was malignant; it was the first case published by Masson.[8] The tumor in Masson's case metastasized to the liver after an interval of nine years; the metastasis produced enormous quantities of steroid in the urine but without any clinical effect, of course, since the patient was an elderly man. Another patient was a boy and the hormone secreted transformed the 9 year old child into the equivalent of an adult male in many respects. This is the only case in childhood that I have seen; there have been a few others recorded. This case was referred to by Melicow, Robinson, Ivers, and Rainsford.[11] The patient was attended by Rezek of the Jackson Memorial Hospital in Miami, and eventually I think he will publish a report on the case. He is waiting for the boy to grow up to learn what happens to him.

Cases of malignant interstitial cell tumor are rare and, so far as I can find out from the little known about them, cannot certainly be distinguished histologically from the nonmalignant tumors. Therefore, in judging our present case I believe that we are dealing probably with two independent interstitial cell tumors, one in the right testis and the other in the left testis, rather than supposing that the one is a metastasis from the other. The first one removed before the tumor appeared in the opposite testis showed the more bizarre cylindrical cells. Time will tell. Perhaps you can report as to the present status of this patient, Dr. Flynn.

Dr. P. T. Flynn, Austin: Living and well.

Dr. A. P. Stout: How long after the second orchiectomy? About nine months. These interstitial cell tumors, benign and malignant, are very rare and it is always interesting to see them. I have not combed the literature; maybe Dr. Flynn has. Have you discovered any other reports of bilateral cases?

Dr. Flynn: The second and third cases of bilateral interstitial cell tumors of the testis to be described were found in 1907 and 1908 in brothers. One brother had a bilateral orchiectomy and both tumors were interstitial cell tumors. The second brother had only one testicle removed; the lesion was likewise an interstitial cell tumor and it was thought that the second tumor was probably an interstitial cell tumor. However, only one case of microscopically proved bilateral interstitial cell tumor actually has been reported.

Dr. A. P. Stout: I would certainly hope that Drs. Bohls and Flynn will report this extremely unusual and interesting case after more time has elapsed in order to learn what happens to the patient. I should be interested to learn how many people in the room have seen an interstitial cell tumor of the testis. Would you hold up your hands? Well, a good many.

Dr. Flynn: Only 34 cases have been reported.

Dr. A. P. Stout: Yes, but I imagine there are some that have not been reported. How many have seen 2? How many have seen 3? No hands at all. So you see, the experience is hard to come by because they really are scarce.

Dr. C. F. Pelphrey, Austin: Do you think "adrenal cell rest" tumors of testis actually are such or are interstitial cell tumors?

Dr. A. P. Stout: Well, as you have worded that—oh, you have "adrenal cell rest" in quotes, so I cannot kid you on that. I was about to say that if they are adrenal cell rest tumors, they are not interstitial cell tumors. I am not familiar with the reports of such cases. Dr. Pelphrey, perhaps you can tell us whether "adrenal cell rest" tumors look like interstitial cell tumors. You must have seen resemblances to raise this point.

Dr. Pelphrey: Reported in the *Archives of Pathology* some two years ago was a case, and I wondered at the time how one would differentiate these tumors.

Dr. A. P. Stout: I would think that probably before I would be willing to call a lesion an adrenal rest tumor it would have to imitate sufficiently well the histologic aspect of adrenal cortex for me to recognize it as such. If it did not, I would think it a shot in the dark to call it an adrenal rest tumor. Whether or not they are actually interstitial cell tumors I do not know because, as you are well aware, most of them have occurred in adults and their hormonal secretion, unless detected by chemical analysis, has no effect on the individual if he is an adult.

RETICULUM CELL TYPE LYMPHOSARCOMA OF TESTIS

CASE 13.—Contributed by Col. C. J. Lind, Brooke General Hospital, Fort Sam Houston.

Patient.—65 year old white man.

Specimen.—Testicular tumor.

History.—This patient noticed a painless enlargement of the right testis two weeks before admission. After a hydrocele containing 90 cc. of clear fluid was aspirated, enlargement of the epididymis and testis was noted. The testis and epididymis together measured 4 by 8 by 8.5 cm. On cut section the normal architecture of both structures was obliterated by firm grayish yellow homogeneous tissue.

Diagnoses Submitted.—Reticulum cell sarcoma, 6; lymphosarcoma, 6; malignant lymphoma metaplasia, 1; seminoma, 7; mesodermal neoplasm, malignant, 2; malignant endothelioma, 1; dysgerminoma, 2; adenomatoid tumor, 1.

Dr. A. P. Stout: (Lantern slides.) You recall that this is a tumor which infiltrated the testis. The part selected for photography does not show any of the testicular tubules; however, there are some scattered around at widely spaced intervals and these tumor cells infiltrate between them. The cells grow in groups. The reticulin stain shows a great deal of fibrous supporting framework. Some of that, I have no doubt, is the original supporting framework of the testis and the rest is probably a fibrous tissue that grows to support the tumor cells. It is obvious, however, that the cells we see here are not completely devoid of association with fine reticulin fibers which pass among them so that only two, three, or four cells are in a group.

The characteristics of the individual cells are shown in this high magnification. The cells are variable in size; the nuclei, too, are variable, some of them quite hyperchromatic, and there are a considerable number of mitoses. These cells vary from twice the size of a small lymphocyte, I would say, to a little larger. They are not very big cells in spite of the high magnification of this picture, which makes them look big.

The cells which infiltrate this testis and epididymis to me look like lymphoblasts. They are certainly malignant tumor cells, and have the general appearance of lymphoblastic cells and not of normal lymphocytes or reticulum cells. I would think that the question of diagnosis must lie between lymphosarcoma or leukemia, or let us say *and* leukemia because it is possible that both might be present in the same patient. I would classify this as a reticulum cell type of lymphosarcoma, perhaps for two reasons: (1) the size of the cell, which is two or more times the size of a small lymphocyte, and (2) the rather rich amount of delicate reticulin fibers which are associated with the tumor cells. Whether the reticulin found in tumors called reticulum cell sarcomas is manufactured by

those cells or is excited by their growth, I do not know. I know that it is possible for a normal reticulum cell to transform itself into a fibroblast and produce connective tissue fibers, but whether this fine meshwork of fibers that forms in connection with such malignant tumors is a product of the tumor cells themselves, I do not know.

Whether or not one chooses to call this a reticulum cell sarcoma, a lymphocytic cell sarcoma, or a malignant lymphoma does not make much difference clinically because all are of practically an equal degree of malignancy. The only form of lymphosarcoma that is less malignant than these two other varieties, in my experience, is the giant follicle lymphosarcoma. If that is a differentiated form of giant follicle lymphosarcoma, it is 25 per cent less malignant than the other less differentiated types.

The second question of interest lies in deciding whether or not this is a primary lymphosarcoma of the testis, where one ordinarily does not expect lymphosarcomas to arise. I can only tell you that we have records in our laboratory of 3 other cases of involvement of the testis by lymphosarcoma. All were classified as reticulum cell type, and in all, either simultaneously or at a later period, lymphosarcoma appeared elsewhere in the body. Colonel Lind, do you have a follow-up on this patient?

Col. C. J. Lind, Fort Sam Houston: This man died and at necropsy had generalized lymphosarcoma.

Dr. A. P. Stout: I notice adenomatoid tumor was a diagnosis in both this and case 12, the interstitial cell tumors. To me the adenomatoid tumor or, as Evans[2] and Masson[9] called it, the benign mesothelioma of the genital tract, looks altogether different from this. It forms tubes which are lined by cells that resemble swollen cells of the serosal coat and the mesothelium of the peritoneum; if stained with mucicarmine, these cells are observed to secrete a mucoid material which I believe is hyaluronic acid. We could find in these two tumors no evidence of tube formation and no evidence of secretion of that sort. These tumors are distinctive in appearance and, whatever they are called, are not difficult to recognize once you have seen two or three of them. I think the diagnosis of seminoma was also made here. I would not be willing to accept that diagnosis because it seems to me the cells are much too small. They do not have the large nuclei and the large rounded form so characteristic of the seminoma.

Dr. M. C. Wheelock, Chicago: In the seminar at Columbia, Mo., in 1949, a case similar to case 13, bilateral in type, was presented. The patient died of widespread lesions interpreted as lymphosarcoma. Three similar cases are described in a recent *Journal of Urology*.

Dr. A. P. Stout: So this case fits in well with some of the rare cases already reported of lymphosarcoma of the testis manifesting itself there as a first lesion.

Dr. Stuart A. Wallace, Houston: What is your present idea regarding the prognosis in lymphosarcoma?

Dr. A. P. Stout: We have to divide the lymphosarcomas according to the site of origin and according to whether the origin is in a focal area or is generalized. If lymphosarcoma appears first in its generalized form, I do not recall any records of cure. It can almost be regarded as a death warrant if the patient has multiple areas of involvement. I would say, however, that you need not necessarily anticipate that death will occur in a short time, because we have had one patient who lived for about eight years after the disease was generalized before dying of the tumor.

If the tumor appears in a single node and is of the differentiated giant follicle type, my experience is that there is a five year cure rate of 50 per cent, and I think that the rate will fall to about 25 per cent at ten years. If it is a reticulum cell sarcoma, a lympho-

Fig. 1. Case. 1. Intramucosal carcinoma of the cervical canal. x 105.

Fig. 2. Case 2. Intraductal proliferation of cells which in this area show no characteristics of cancer. x 300.

Fig. 3. Case 3. Cystic disease with adenosis. x 30.

Fig. 4. Case 4. Glomus tumor of vascular type. x 170.

Fig. 5. Case 5. Hemangiopericytoma showing pericytes massed around small vascular lumens. x 225.

Fig. 6. Case 6. Malignant melanoma metastatic in the submental node of a 10 year old boy. x 105.

Fig. 7. Case 6. Detail showing rounded and elongated tumor cells in cords. x 300.

Fig. 8. Case 7. Xanthogranulomatous tissue involving the kidney pelvis. x 75.

Fig. 9. Case 7. Detail showing lipoid filled phagocytic cells. x 355.

Fig. 10. Case 8. Detail showing a group of squamous epithelial cancer cells set among sarcomatous stromal cells. x 405.

Fig. 11. Case 9. Pleural surface of a fibrous mesothelial tumor showing its relationship with the pleura and its disorderly pattern. x 145.

Fig. 12. Case 10. Two adjacent areas in a pleural tumor, one relatively acellular and the other a profusion of intermingled round and spindle-shaped cells. x 105.

Fig. 13. Case 11. Characteristic pattern of a cylindromatous carcinoma. x 80.

Fig. 14. Case 12. Detail showing cell cords in an interstitial cell tumor of the right testis. x 475.

Fig. 15. Case 12. Detail showing a group of granular interstitial tumor cells from the left testis. x 760.

Fig. 16. Case 13. Silver reticulin impregnation of a lymphosarcoma of the testis. x 300.

Fig. 17. Case 14. Detail from a subcutaneous nodule showing giant cells and fibrous stroma. x 520.

Fig. 18. Case 15. Detail from the spleen showing large cells and granulomatous aspect. x 475.

Fig. 19. Case 15. Appearance of the liver. x 105.

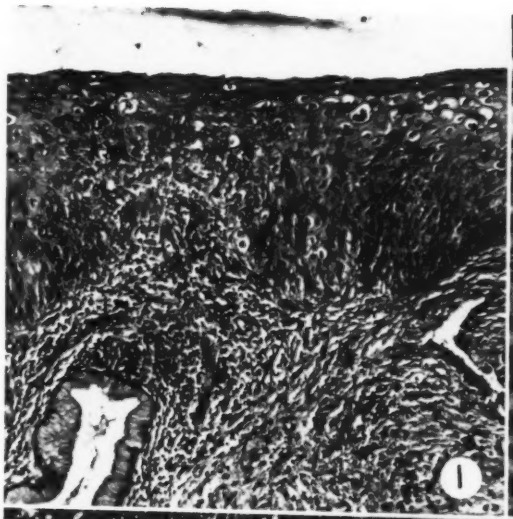
Fig. 20. Case 16. Roentgenograms of the tibia.

Fig. 21. Case 16. Detail showing formation of atypical bone trabeculae. x 145.

Fig. 22. Case 17. Detail of a fibroxanthomatous lesion of the tibia. x 90.

Fig. 23. Case 18. Detail showing the massing of atypical plasma tumor cells. x 760.

Fig. 24. Case 19. Detail showing the pattern of fibrous xanthoma of moderate vascularity in the corium. x 105.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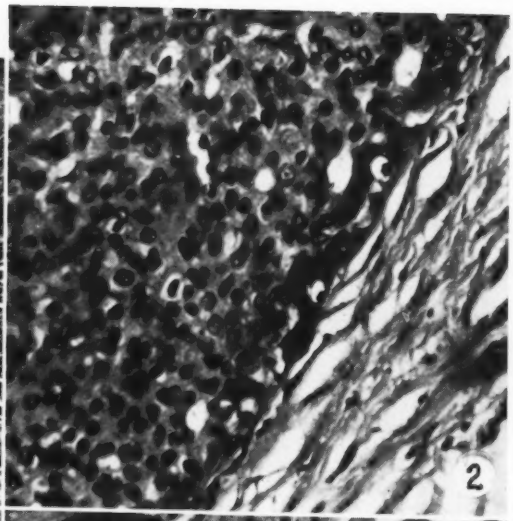
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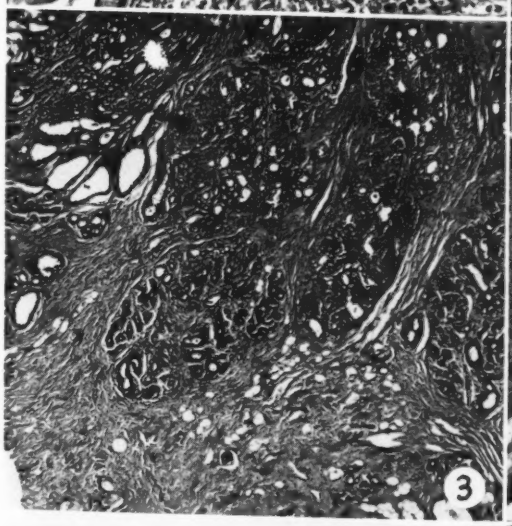
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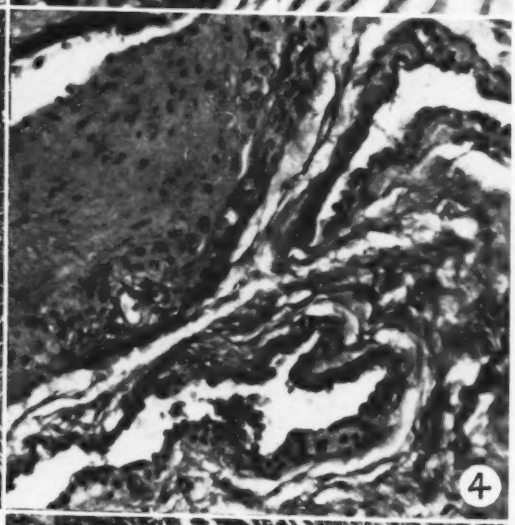
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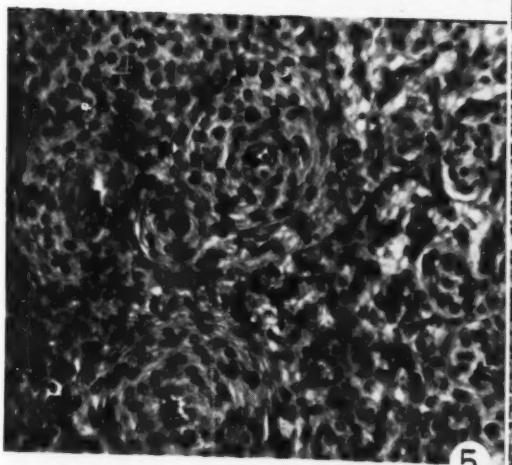
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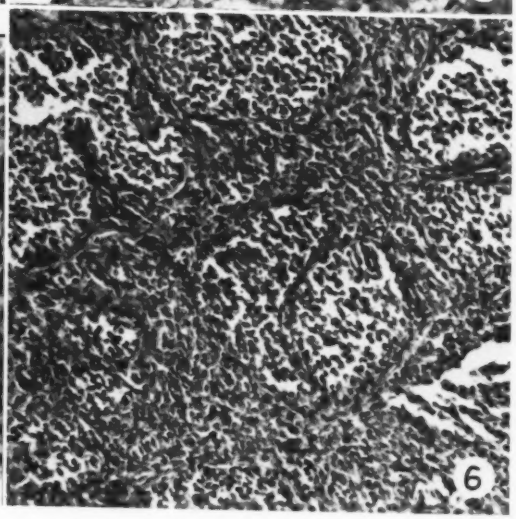
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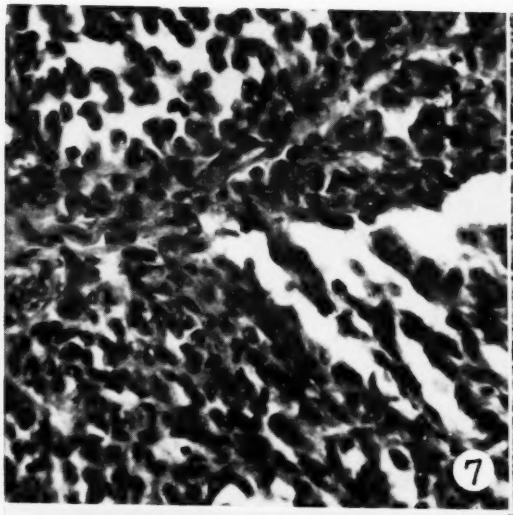
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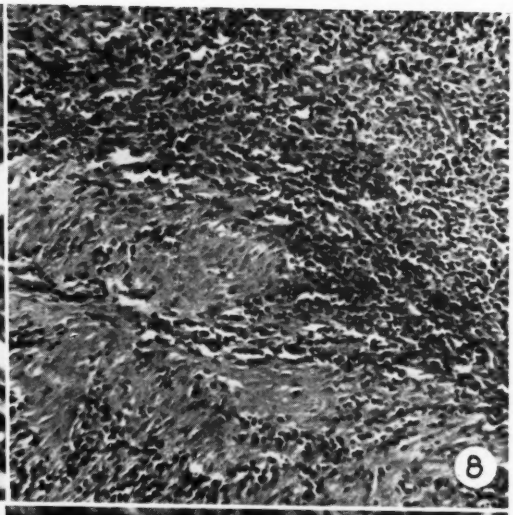
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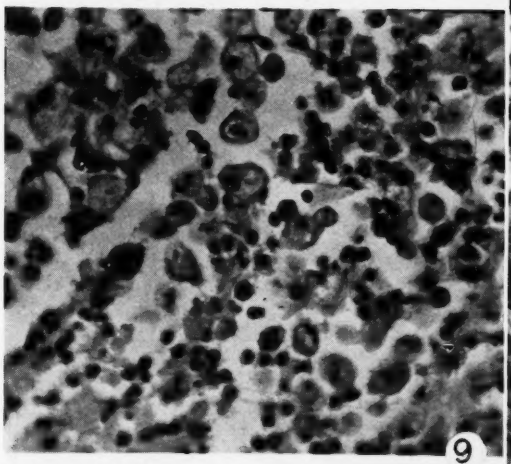
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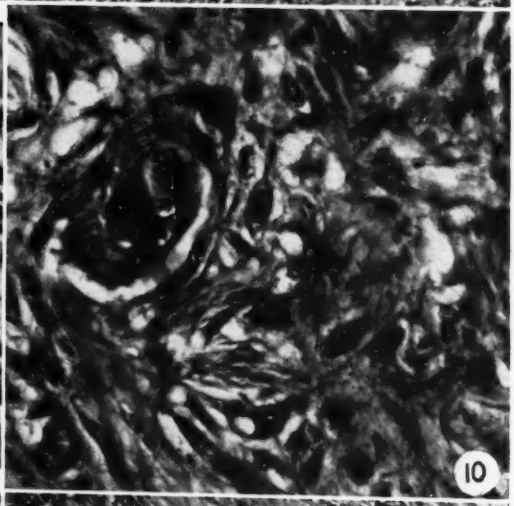
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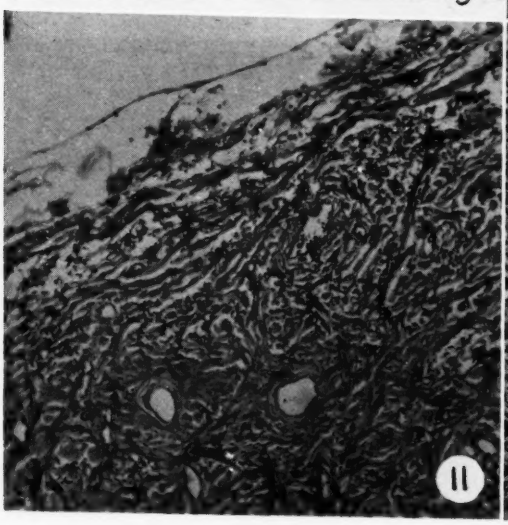
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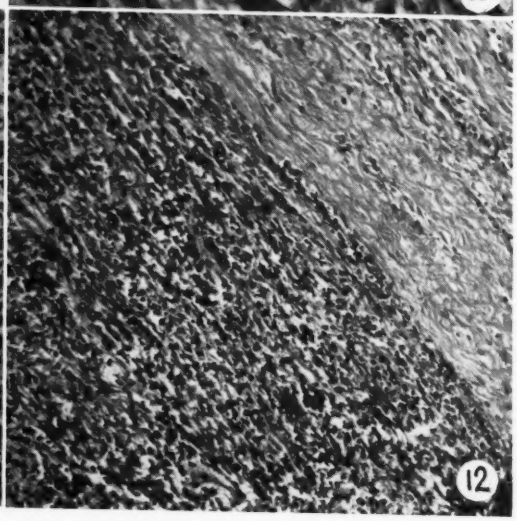
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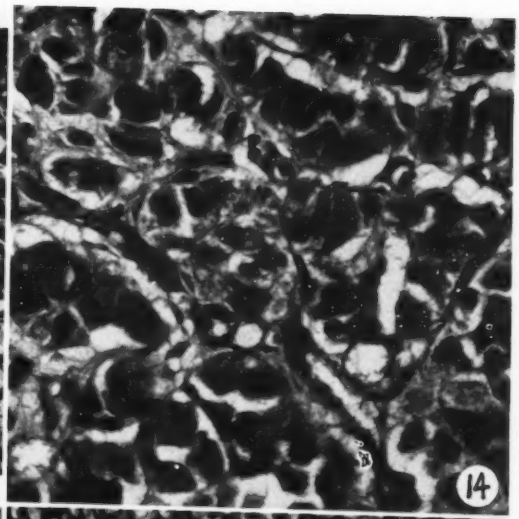
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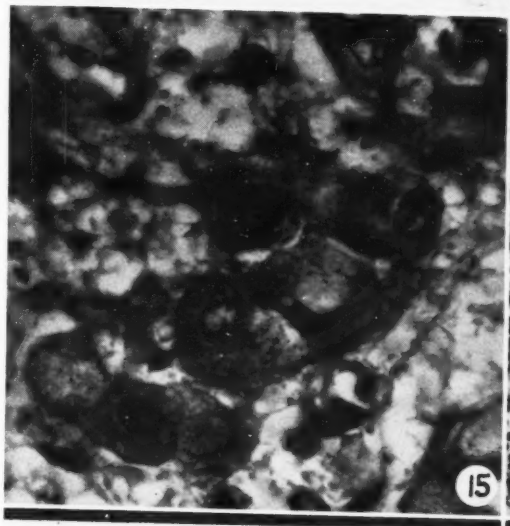
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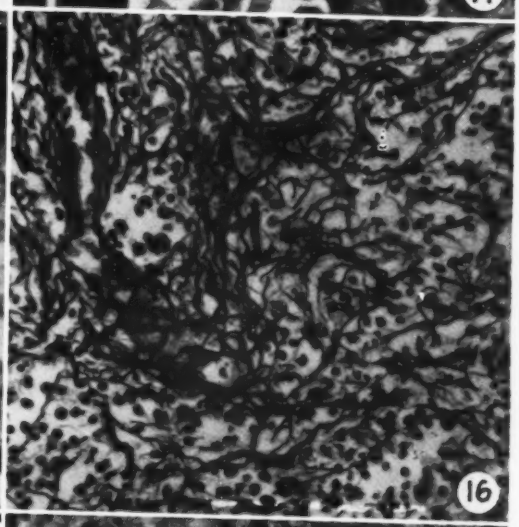
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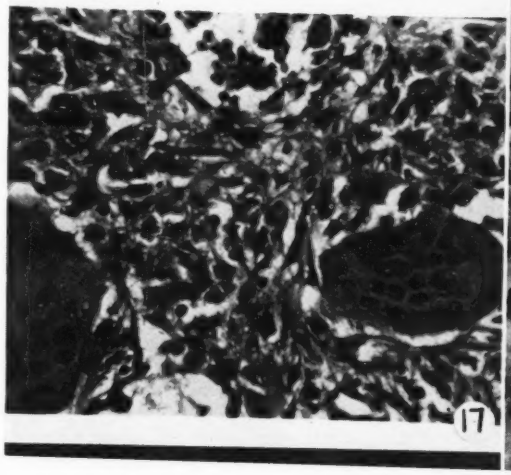
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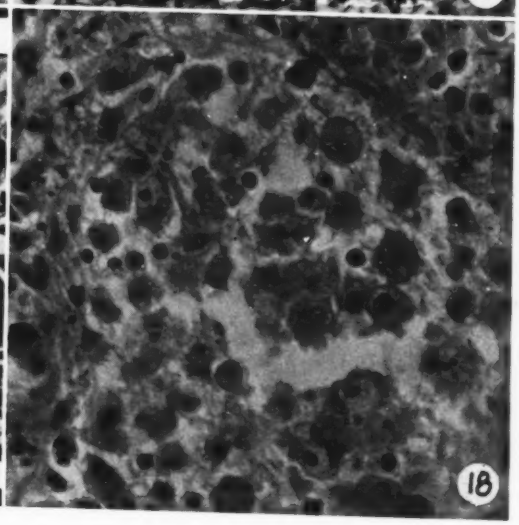
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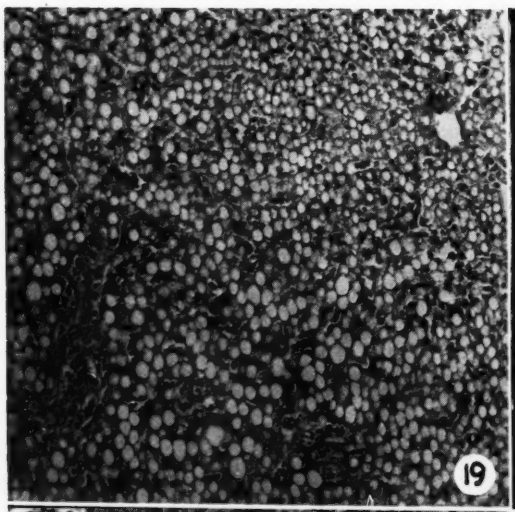
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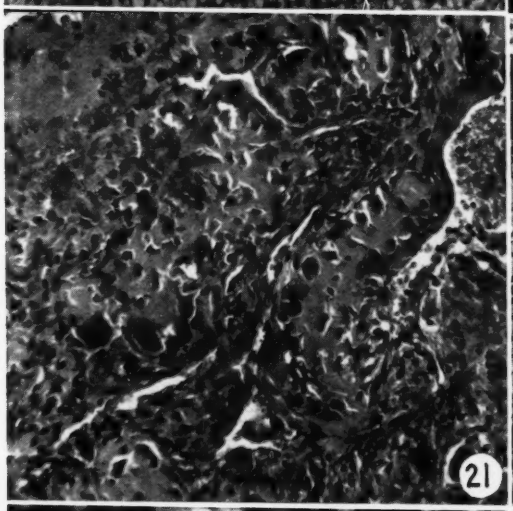
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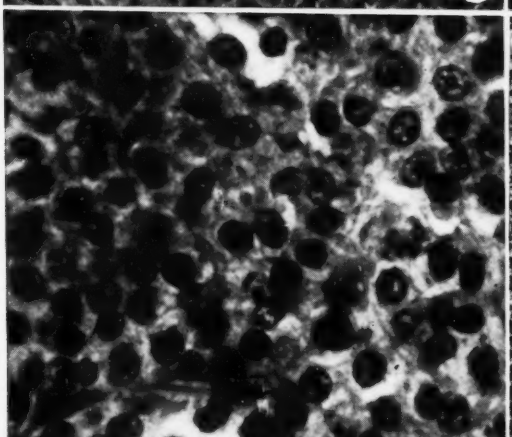
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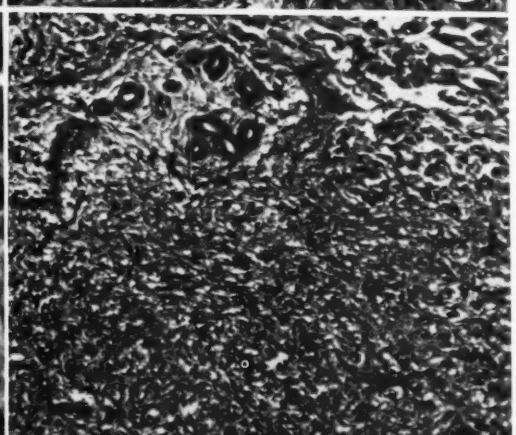
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cytic cell sarcoma, or an undifferentiated form of giant follicle lymphosarcoma in which the follicles are only imitation follicles and not genuine, then the five year cure rate is about 25 per cent and the ten year cure rate is only 7 or 8 per cent; if you do not want to call it cure, call it symptom-free survival. The focal involvement of lymph nodes is fairly uncommon in instances in which only one lymph node is involved. Focal involvement in the gastrointestinal tract, the oral cavity and pharynx, or the skin is not as uncommon as in the lymph nodes and has distinctly a better prognosis than the involvement of two or more groups of nodes. It is still questioned, I believe, whether lymphosarcoma is ever cured, and I suppose we do not yet have an answer to that because the follow-up studies have not been carried out a sufficient length of time. After all, it is not easy to follow cases fifteen or twenty years and get enough cases to be statistically significant. Usually it is not possible, either, to get autopsies on patients to hunt for traces of persisting occult tumor.

For me, lymphosarcoma seems to exhibit two different disease patterns, both with the same histologic picture but with different clinical behavior. There is the more common lymphosarcoma that causes death in two, three, or more years with multiple involvement and the altogether different variety that has the solitary or focal involvement and is not always followed by involvement of other areas. I do not know any way to distinguish histologically between the two. Probably we must find some other method of investigation.

Dr. Robert Hausman, San Antonio: Do you recognize the disease entity reticulosarcomatosis or reticuloendotheliosis (malignant) whereby there is malignant involvement of the reticuloendothelial system without actual tumor formation, for example, Letterer-Siwe's disease or Casal's "reticulose histiomonocytaire"?

Dr. A. P. Stout: I think that there is such a disease as reticuloendotheliosis, but whether or not is a true neoplasm, I think is questionable. I would hesitate to apply the term reticulosarcomatosis until we were able to demonstrate beyond question that the growth really was a neoplasm. I think it stands somewhat in the same category as Hodgkin's disease and Kaposi's disease; whether or not they are neoplasms, we do not know. At least I do not know and am anxious to have someone settle the problem. I believe that Hodgkin's disease can end as a reticulum cell sarcoma or a good imitation, but that does not necessarily make the granulomatous form of Hodgkin's disease a true tumor. That is as far as I can go in answer to that question.

Dr. J. H. Childers, Galveston: What has been the clinical and pathologic course of cases of "lipomelanotic reticulosis" that you have seen?

Dr. A. P. Stout: If you mean are they ever neoplastic, the ones I have seen pursued a benign course. I have never seen a case that I thought was a neoplasm. It seems to me that generally this is a reaction in lymph nodes associated with certain skin lesions in which lipoid and/or melanin is carried to the node, occasioning a marked proliferation of the reticuloendothelial cells and phagocytosis of the lipoid and/or melanin.

GIANT CELL TUMOR OF BONE

CASE 14.—Contributed by Dr. S. W. Bohls and Dr. P. T. Flynn, Austin.

Patient.—26 year old white woman.

Specimen.—Bone tumor.

History.—Roentgen-ray studies in March, 1948, revealed an area of bone destruction involving the lower one-third of the femur and entire lateral condyle. The cortex was expanded with an abrupt break along the lateral aspect, at which point a faint "soap bubble" appearance was noted. The lesion was thoroughly curetted. In December, 1949, a well-encapsulated, reddish brown, rubbery subcutaneous nodule was removed from the region of the lateral femoral condyle. The biopsy specimen was taken from this nodule.

Diagnoses Submitted.—Giant cell tumor, 8; giant cell tumor, malignant, 6; giant cell tumor, benign, 9; osteogenic sarcoma, 1; osteoclastoma, clinically malignant recurrence, 1; transplant from surgery of benign giant cell tumor, 1.

Dr. A. P. Stout: I take it that giant cell tumor and benign giant cell tumor are synonymous and that osteoclastoma is synonymous with giant cell tumor of bone, with a clinically malignant recurrence (that is a nice hedge).

(Lantern slides.) Here is the roentgenogram which shows the situation of this tumor in the lower end of the femur. I cannot see clearly enough to know whether there is a break through the cortex. Was that interpreted, Dr. Flynn, as breaking through the cortex?

Dr. P. T. Flynn, Austin: Dr. James D. Wilson is here. He is the radiologist who saw this patient.

Dr. A. P. Stout: Dr. Wilson, will you interpret the lesion?

Dr. James D. Wilson, Austin: The film is a little too dark there, but it shows a soap bubble appearance with a definite expansion of the cortex. At one or two points it looks as if it has broken through.

Dr. A. P. Stout: You can see the soap bubbling effect perhaps down there, but actually it is visible all the way through.

Here in the lower power section a tumor is seen. This is a representative field of the tissue that was removed from the cavity. It is fibrous with many phagocytes, including many large, multinucleated pha-

gocytes resembling osteoclasts, and also a considerable number of mononuclear cells which are probably phagocytic. In this high power photomicrograph the characteristics are much better seen than in low power. There is a tremendous giant cell here with its many nuclei, the mononuclear phagocytic cells, and the fibroblastic cells and the fibers that lie in between them. This picture was taken to illustrate mitoses; there is one definite mitotic figure. I looked at this photomicrograph transparency yesterday and tried to understand exactly what was going on: whether it was the termination of the division of a cell or whether the partly divided cell had two nuclei which were about to divide again. I will leave the interpretation to you, but certainly mitoses in some areas are more frequent than in other areas.

Since this is a fairly important case, I had better note first that we do not have the slide of the original lesion but only of the recurrence in the subcutaneous tissue. However, I saw the slide of the original lesion as well as the one of the nodule in the subcutaneous tissue; the lesions looked much the same. There is a marked proliferation of fibroblasts with connective tissue fibers in the section of the subcutaneous nodule. In the bone there were only a few multinucleated giant cells and more foam cells containing lipoid. I could see no definite evidence of new bone or osteoid tissue in the original section. In the section of the subcutaneous nodule that I examined, there were relatively few mitoses. There are perhaps more mitoses in the subcutaneous nodule than in the original lesion but certainly not in all parts. In neither of the nodules could I recognize any atypical cells and the only possibility that I could suggest for consideration of malignancy was the number of mitoses. However, as I said, in the section of the recurrent nodule that I examined I did not see a sufficient number of mitoses to make me strongly suspect malignancy.

Let us first discuss what to call the primary lesion. There is much ignorance and uncertainty concerning most bone lesions. I did not know when I studied this case that there was a solitary bone lesion; however, roentgenograms of the skeleton showed no other lesions. The lesion involved the epiphyseal end of the bone but it also involved the shaft, the lower part of the metaphysis. The almost complete absence of giant cells and the excess of fibrous tissue in the original growth does not make it fit into what Jaffe wished to call a characteristic giant cell tumor of the epiphyseal ends of bone. He would classify it, I think, as a form of fibrous dysplasia with giant cells. The adult appearance of the fibroblasts and the almost complete absence of mitoses in the original lesion made me think that it did not show any evidence of being a malignant sarcoma. How, then, is one to explain this nodule in the subcutaneous tissue appearing subsequent to the operation?

I will go along with those who suggest that this is an implant and a continuation of the same process in the subcutaneous tissue. Certainly that must be an uncommon event. I do not know that I have ever seen it happen before but I could not convince myself that enough mitotic activity was present to call the lesion the osteolytic form of osteogenic sarcoma. I suppose we shall learn only by time whether or not that diagnosis is correct. Dr. Flynn, can you tell us the present status of the patient?

Dr. P. T. Flynn, Austin: This girl was operated on in December, 1949; the lesion was thoroughly curetted and this nodule removed. There have been no signs of tumor recurrence.

Dr. A. P. Stout: Of course, ten months is too soon to determine whether or not this was a malignant tumor. If it was malignant, it must be the osteolytic form of osteogenic sarcoma. As I say, the cases of that variety imitating giant cell tumors or fibrous dysplasia which I have seen have been detectable usually because a considerable number of mitoses were present, and so far as I could see in the sections I examined there were not a great many mitoses. Moreover, I think it must be rare indeed for such osteolytic osteogenic sarcomas to imitate so perfectly the appearance of a benign tumor. I do not say, however, that they cannot appear benign. We have had some strange cases of what seemed to be benign tumors with fibrous tissue and giant cells which metastasized to the lung.

I think in one of the earlier seminars at Columbia, Mo., such a case, starting in the ilium with a metastasis in the lung, was reported. The trouble with that case—and it has always left me in a state of uncertainty—was that the section of the tissue removed from the ilium was extremely unsatisfactory for examination and I could not make up my mind surely whether it looked benign. I see Dr. Wheelock remembers that case. It occasioned a good deal of discussion.

I think this tumor is a case of fibrous dysplasia, or if you wish, osteitis fibrosa localisata of the femur with a subcutaneous implant or extension one year after local removal.

Dr. C. T. Ashworth, Fort Worth: Will you please restate your interpretation of the multinucleated cells of giant cell tumors? I believe you referred to them as phagocytic cells. Do you consider them to be different from osteoclasts?

Dr. A. P. Stout: I think osteoclasts and giant cells are both phagocytic. You want me to say whether I think that an osteoclast is a specific kind of a bone-eating phagocytic cell, and I will have to say I do not know. I think one can find sometimes in tumors

of tendon sheaths or in the gum, giant cells which I would not be able to distinguish from the giant cells of a giant cell tumor. Dr. Ashworth, what do you think about it?

Dr. Ashworth: The question I had in mind was, are these the same kind of multinucleated giant cells which are seen in granulomas?

Dr. A. P. Stout: I suppose that bone is a fairly indigestible substance and that powerful cells well armed with nuclei are required to eat it. I do not know whether or not osteoclasts are specific forms of phagocytic cells. Very possibly they are.

Dr. Ashworth: Is there a difference between malignant giant cell tumor of bone and the osteolytic type of osteogenic sarcoma?

Dr. A. P. Stout: No. To my mind a malignant giant cell tumor of bone is an osteolytic form of osteogenic sarcoma which imitates the appearance of a benign giant cell tumor. Apparently some tumors can imitate fairly closely the appearance of benign giant cell tumors of bone but produce metastases; however, I think the majority are sufficiently peculiar so they do not exactly resemble the ordinary giant cell tumor of the bone. The differentiation of certain malignant giant cell tumors from those which are benign is a question that remains unanswered. I had to struggle with it in connection with the giant cell tumors of tendon sheaths.

Dr. M. J. Stewart, who is going to conduct your seminar next year, believes that there is a malignant giant cell tumor of the tendon sheath. Perhaps you can get him to express his views when he is here. However, all the cases that have been reported (and I have looked at the pictures of them) seem a little peculiar. They do not look like ordinary giant cell tumors and I have never been certain exactly what they are. Therefore, I have to confess that I do not know the definite answer to your question. I suppose there is a difference between them but if there is, I do not know what the difference is.[19]

POSSIBLE LETTERER-SIWE'S DISEASE

CASE 15.—Contributed by Dr. J. M. Moore, Santa Rosa Hospital, San Antonio.

Patient.—11 month old Latin-American girl.

Specimen.—Spleen and liver.

History.—The patient was dead on arrival. The spleen weighed 340 Gm., the liver 530 Gm. The abdominal lymph nodes were enlarged, some to 1 cm. in diameter.

Diagnoses Submitted.—Niemann-Pick's disease, 7; Gaucher's disease, 6; Letterer-Siwe's disease, 5; lipoid storage disease, 3; trypanosomiasis (Chagas' disease?), 1; kwashiokor, 1; ingestion or inhalation of poison, 1.

Dr. A. P. Stout: I would like to ask Dr. Moore if he can give us any more information about the case. Certainly he will not be able to give us much clinical information since the patient was dead on arrival, but what about other parts of the body in the autopsy? The abdominal lymph nodes were enlarged. Did they show the same changes as were seen in the liver and spleen?

Dr. J. M. Moore, San Antonio: We examined several of the other organs and thought we found the same lesion in the liver and possibly in the mediastinal lymph nodes. However, we did not study the bone marrow, which I think would have been worth while. The request for a routine autopsy was made and the resident doing the autopsy did not suspect anything special, therefore did not take the precautionary measures to get anything other than routine tissue specimens.

Dr. A. P. Stout: Was there any involvement of the lung?

Dr. Moore: Not especially. We thought there might be some involvement under the mediastinal nodes.

Dr. A. P. Stout: Now to discuss the diagnoses. I thought we would get into difficulties here. I was sent a whole lot of cases by the various members of the group here from which to select the ones for discussion, and I had no intention of selecting this case. Will somebody tell me about kwashiokor?

Dr. Robert Hausman, San Antonio: A deficiency disease associated with chronic malnutrition, showing a fatty liver. The name is from an African dialect and means "thin boy."

Dr. A. P. Stout: (Lantern slides.) You probably recall that the enlarged spleen showed a great many spaces or places where an accumulation of rather large cells could be seen well in the photomicrograph. Some of them are definitely vacuolated in part but most of the cytoplasm does not seem to be vacuolated. A lipoid stain shows the presence of some lipoid in the vacuolated cells. These large cells are associated here with various other cells of the spleen and the normal architecture of the spleen is obscured; only traces of the normal structure are to be found. All of you must have been impressed by the large amount of lipoid in the liver cells. The liver, of course, is striking in appearance with all that lipoid. A scharlach R stain has confirmed the nature of the lipoid.

I am not competent to discuss this case because I do not often see pathologic lesions of infants. Consequently, I can give you only an amateur's opinion. I did not understand the lipoid storage in the liver. To me, it did not seem to fit in with what I supposed was a reticuloendotheliosis involving the spleen, and to a lesser extent the liver.

I thought that the lesion is not Gaucher's disease because of the character of the cell. I have seen several cases of Gaucher's disease and the Gaucher cell has a reticulated appearance with elongated spaces. I have not had much experience with Niemann-Pick's disease; I have seen only a couple of slides of cases that somebody told me were representative of the disease and have never studied the disease as an entity. The material in the cells in the Niemann-Pick disorder is a phosphatide. In my opinion, this case is probably not Niemann-Pick's disease. I am sure it is not eosinophilic granuloma. Schüller-Christian's disease, I imagine, should have more lipoid, which is, I believe, cholesterol, in the cells. The amount of lipoid in the cells of this tumor is very slight. I do not think it is a widespread case of hypercholesterolemia with xanthomatosis because the cells are not characteristic foam cells, such as one should expect to find in cases recognized as multiple xanthomatosis. That leaves Letterer-Siwe's disease, which seemingly is a vague, although a fatal disease of the reticuloendothelial system in infants which supposedly is somewhat comparable to Schüller-Christian's disease but without lipoid in the cells. That was the original idea. However, more recently it has been stated by several reporters that it is possible to have some lipoid in the phagocytic giant cells of Letterer-Siwe's disease. Therefore, I suggest Letterer-Siwe's disease as a diagnosis and am glad to see that some of you thought along the same lines.

I wish somebody who knows the reticuloendotheliosis intimately would tell us what this really is. I think we are handicapped by the absence of any clinical study of the patient. Dr. Moore, were there any skin manifestations?

Dr. J. M. Moore, San Antonio: Not so far as I know.

Dr. A. P. Stout: Was the child emaciated?

Dr. Moore: I think she was.

Dr. A. P. Stout: I do not want to have any questions. I want somebody to come up here and talk.

Dr. Stuart A. Wallace, Houston: There are two things on which I would like to comment. In the first place, I think that Letterer-Siwe's disease is not supposed to have that much fat, if the fat in the liver represents the abnormal fat. The other is that to me the liver looked more as it would in poisoning or vitamin deficiency or something like that, and I believe that the true disease is not shown in these two sections. That is as far as I would go.

Dr. A. P. Stout: I supposed that the fatty change of the liver was not directly associated with the reticuloendotheliosis, so two different conditions may be present. I wish somebody else would discuss this case.

Dr. Severance tried to prime me ahead of time by giving me this *Archives of Pathology* for November, 1949, which has a report of a case of Letterer-Siwe's disease which histologically might resemble this and from which I got the information about the possibility of some lipoid being found in the cells.

Lt. Col. Frank M. Townsend, San Antonio: Was the thymus examined? If so, what did it show?

Dr. J. M. Moore, San Antonio: We did not think the thymus was involved with the disease.

Audience Member: About three or four weeks ago we did a biopsy on a child 2 years old. At the time I thought it was a Boeck's sarcoid. The patient was admitted to the Children's Hospital in Dallas and the diagnosis of Letterer-Siwe's disease was made there. My impression of the slides shown here is that this is a good example of what Letterer-Siwe's disease is not.

Dr. A. P. Stout: I think probably we should regard this case as a failure for the entire company present, including the moderator. I do not think we have solved it.[5]

OSTEOGENIC SARCOMA OF BONE

CASE 16.—Contributed by Col. C. J. Lind, Brooke General Hospital, Fort Sam Houston.

Patient.—38 year old Negro man.

Specimen.—Bone, tibia (tumor?).

History.—There was pain and swelling of the left upper leg for approximately two weeks. Extending from the level of the patella downward for 12 cm. was a soft, cool swelling anteriorly, 9 cm. in diameter. Roentgen-ray revealed dense, newly-formed bone along the lateral surface of the upper half of the tibia with irregularity of structure and contour. Trabeculations were parallel with the long axis. There was no involvement of the knee joint. Exploration showed a cavity within the bone with extensive necrosis and old hemorrhage.

Diagnoses Submitted.—Osteogenic sarcoma, 16; osteogenic sarcoma, osteolytic, 3; periosteal sarcoma, 1; giant cell tumor sarcoma, 1; periostitis, osteomyelitis, 1; fibrous dysplasia, 1; callus, 1; healing fracture, 1; bone cyst, 3.

Dr. A. P. Stout: Here is the roentgenogram; maybe Dr. Wilson will interpret what he sees in it.

Dr. James D. Wilson, Austin: You can certainly see some bone production. It has a very irregular outline, as seen chiefly on the posterior and lateral aspects of the tibia. A little change here. The bone seems to be more or less homogeneous in nature and the irregularity there suggests the possibility of a malignant tumor, although you may see a condition much like that in a thousand cases of trauma. It is a little hard to say from this roentgenogram what the tumor is, but I think certainly it should be considered malignant —a sarcoma.

Dr. A. P. Stout: Would you say probably osteogenic?

Dr. Wilson: Probably an osteogenic sarcoma.

Dr. A. P. Stout: (Lantern slides.) These three microphotographs are from the biopsy specimen, which was generous, perhaps fortunately, because it gave a good opportunity to see what the growth is doing in different parts of the lesion. In my opinion this is an osteogenic sarcoma. The formation of atypical osteoid is so characteristic in the roentgenogram we have seen that I do not hesitate about the diagnosis. I think that in diagnoses in which the bone is involved the pathologist ought to have the advantage of seeing the roentgenogram and hearing the radiologist's interpretation. Certainly diagnosis on bone tumors is hard enough anyway, so that you ought to call in every aid you can in its interpretation.

When I studied this case in New York I had two sections from the biopsy specimen and one from the amputation. The sections from the biopsy material impressed me because if the specimen had been smaller or if not so much of it had been sectioned and stained, the diagnosis of malignancy might have been easily missed or wrongly interpreted. However, with the generous biopsy sections I was perfectly willing to make the diagnosis of osteogenic sarcoma. Now we know that the tumor definitely was such and that it had metastasized, as was to be expected.

FIBROXANTHOMA OF BONE

CASE 17.—Contributed by Col. C. J. Lind, Brooke General Hospital, Fort Sam Houston.

Patient.—18 year old white man.

Specimen.—Bone, tibia, tumor.

History.—A roentgenogram for possible chip fracture of the left ankle joint revealed a cystic-appearing lesion with sclerosis in the lower one-third of the tibia. There was slight expansion of the bone cortex for a distance of 5 cm.

Diagnoses Submitted.—Liposarcoma, 1; medullary fibrosarcoma, 2; fibrous dysplasia, 10; fibroxanthoma, 1; xanthoma, 1; neurofibroma, 2; lipoid granuloma, 5; Gaucher's disease, 1; benign bone cyst with old hemorrhage, 1; neurinoma, 2.

Dr. A. P. Stout: Now we will have the roentgenogram.

Dr. James D. Wilson, Austin: In the roentgenogram you can see an expansion of cortex in the bone, with a superficial cystlike area at this point with a little reaction about it; the whole area has a slight appearance of rather coarse trabeculation. On the posterior surface it looks as though there is a break in the continuity of the cortex, which may have been the occasion for this examination as the patient was x-rayed for an injury. I thought awhile ago of the possibility of an osteoid osteoma, although no history is given suggestive of it. I do not believe this lesion has that appearance at all because it is not localized just around the area of decreased density. Therefore, I do not know exactly what I would call this tumor.

Dr. A. P. Stout: Do you think it is a benign or a malignant lesion?

Dr. Wilson: I think it might be benign.

Dr. A. P. Stout: (Lantern slides.) This is a fibrous lesion, destructive of bone and associated with great numbers of foam cells which are apparent in these photomicrographs. A fat stain was not done but the cells look like fairly characteristic foam cells; I assume that they are such and that they contain lipoid.

I gathered from the story that this was a solitary lesion in the bone and not related to any metabolic, hormonal, or generalized reticuloendothelial disturbance. I did not think that the cells looked like those of Gaucher's disease because they seemed like ordinary phagocytic foam cells. The lesion is largely fibrous and I am not sure why there appears in the roentgenogram to be so much thickening of the bone. Evidence of that does not appear in the slides which we have, which show largely a destructive lesion. I suppose there must have been an increase in the density of the bone surrounding this lesion and that the thickened bone was left behind.

How should a lesion such as this be classified? In fibrous dysplasia it is possible to have some foam cells, but I never thought that it was proper to call a lesion fibrous dysplasia when as many foam cells as are apparent in this case were present. Histologically, this lesion looks like a number of the tumors or enlargements of the retroperitoneum and mediastinum to which the name fibrous xanthoma or fibroxanthoma has been given. I suppose that this lesion probably is some variant of a solitary xanthoma or fibroxanthoma of bone.

In our laboratory under that diagnosis were 7 cases which histologically were similar to this one: 5 in males and 2 in females, aged 9, 10, 19, 22, 23, 47, and 54 years. The bones involved were the humerus twice, the femur twice, the mandible twice, and a rib once. In each case the lesion was solitary and pain or chance led to roentgen-ray examination, except in the cases involving the mandible, in which swelling called attention to the lesion. All of the lesions were treated by curettage except the one in the rib, which was treated by resection. In none of the cases was there a reappearance of a similar lesion elsewhere. The lesions apparently were cured in 6 cases by curettage alone.

I suppose if one wishes, he can disregard all those foam cells and simply classify this as a fibrous dysplasia. I hesitate to do so because I would like to learn more about this lesion of which so few examples have been seen. I would like to learn whether it is always

a solitary lesion of this sort and whether it can be cured by curettage. Just labeling it fibroxanthoma does not tell us what the lesion really is; that is more or less a histologic diagnosis but I do not know what else to call it. The lesion must have a name, and that is what we are using for it in our laboratory. I certainly do not urge it on anybody.

In regard to some other diagnoses that were made, I notice that one was liposarcoma. The question of liposarcoma of bone has been interesting to me because the term was originally introduced by Stewart[14]; all of the cases in the literature have been reported either by Dr. Stewart or by persons who consulted him and to whom he suggested the diagnosis of liposarcoma. He has agreed now that the tumors which he originally labeled liposarcoma probably were not liposarcomas and that he does not know what they are, but he insists they were malignant tumors. They do not have any resemblance to this lesion; they contained extremely bizarre cell formations. I believe it is proper to exclude any of the generalized reticuloendothelioses because this is a solitary lesion. I am also influenced by the 7 other solitary lesions we have had which were comparable to this and which in the follow-up did not show any other developments which could be interpreted as generalized reticuloendothelioses or malignancy.

Col. C. J. Lind, Fort Sam Houston: How often does sarcoma arise in fibrous dysplasia of the bone?

Dr. A. P. Stout: I cannot answer that by statistical numbers. I would say seldom. It is certainly possible for the tumor to arise in fibrous dysplasia; there have been reports of such cases in publications from the Memorial Hospital. I do not remember how the frequency of the malignant tumors which generally were osteogenic sarcomas compared with the total number of malignant bone tumors. My impression is that it is not many. We have seen some but certainly not many. I think that some reported cases can be excluded. I do not mean any of the ones from the Memorial Hospital, for I think they are carefully screened. However, I think some other cases probably were malignant tumors from the start and were not malignant sarcomas developing from a preexisting fibrous dysplasia.

Dr. A. Villasana, Mexico City: Are xanthomas or fibroxanthomas true tumors?

Dr. A. P. Stout: I cannot say whether they are or not. I have an opinion, but that is all. I question very much whether they are true tumors. Like a number of other benign growths with and without foam cells filled with lipoid, they do not seem to me to behave like true neoplasms. They can grow sometimes to quite a size but are generally self-limited, and often the xanthomatous elements can be accounted for by some lipoid dyscrasia in the patient. I can only say that my impression is that they are not true tumors.

Dr. Robert Hausman, San Antonio: Does the solitary fibroxanthoma of bone differ histologically from the lipoid granuloma of Hand-Schüller-Christian's disease?

Dr. A. P. Stout: I would say yes. The solitary fibroxanthoma that I have seen is like this one—a discrete, well differentiated sort of lesion made up of many foam cells and more or less fibrous tissue. To me, Hand-Schüller-Christian's disease is much more a vague granuloma that includes lipoid-containing cells. It is often associated, particularly in eosinophilic granuloma, with a variety of other nonlipoid storing cells such as eosinophilic leukocytes. There may be a good many lipoid cells but the lesions are more diffuse and have more so-called inflammatory cells mixed with them.

PLASMOCYTOMA

CASE 18.—Contributed by Dr. S. W. Bohls and Dr. P. T. Flynn, Austin.

Patient.—59 year old white man.

Specimen.—Nodule from neck.

History.—This farmer had been well until November, 1948, when he noticed a "lump" in the left side of the neck. He lost from twelve to fifteen pounds during the next four months and complained of nervousness and malaise. A mass 2 cm. in diameter was excised. Subsequently, five similar nodules have been removed from the neck at various times. During March, 1950, roentgenograms of the chest, ribs, head, pelvis, humerus, and femur were negative. There was a moderate normocytic anemia. The urinary findings were not remarkable.

Diagnoses Submitted.—Plasmocytoma, 15; multiple myeloma, 2; carcinoma of the thyroid, 1; reticulum cell sarcoma of the cervical lymph node, 1; carotid body tumor, 3; paraganglioma, 1; parathyroid adenoma, 4.

Dr. A. P. Stout: (Lantern slides.) There is just this one section shown in the photograph as I recall. This is an attempt to take a high power photomicrograph of the cells which filled that nodule, and a field in which some of the cells suggest the cartwheel effect of the nuclei of plasma cells. The rest of the cells are not so distinctive. Some of them have the nuclear material scattered through the nucleus in a rather atypical fashion; some of them have big central nuclear masses which are not characteristic of the plasma cell. We have to try to decide whether to consider this a plasma cell tumor or some variant of its relatives in the zone of lymphosarcoma, for instance.

We can regard this as a malignant tumor, and the only question is how should it be classified. When I first saw this growth, I concluded that it should be classified as a plasma cell tumor. I wondered if it were to be regarded as primary in the lymph nodes or if these lymph nodes represented metastasis from a possible primary lesion in the pharynx or oral cavity.

From the history there is no evidence of that. Perhaps Dr. Flynn can tell us whether any such evidence has since appeared.

Dr. P. T. Flynn, Austin: The loss in weight is a fly in the ointment because the patient lost weight primarily because of nervousness. He rapidly regained it and the last time I saw him, three months ago, he looked as well as he ever had. We had studied the bone marrow and there were no plasma cells or anything to suggest multiple myeloma of the bone.

Dr. A. P. Stout: And no lesions in the oral cavity or pharynx? You note that complete bone studies by roentgen-ray were negative, as well as the report which Dr. Flynn gives us on the bone marrow. Nevertheless, I think I would adhere to the probable diagnosis of plasmocytoma, and if so, the lesion must represent an example of the type of plasma cell tumor that has a primary extramedullary onset. Now, whether such lesions will secondarily involve the bone marrow is problematic because in a number of cases recorded and followed a considerable length of time, the bone marrow has never become involved. The principal places where the primary extramedullary tumors have been found have been the oral, nasal, and pharyngeal spaces and the gastrointestinal tract; I have seen 1 case in the skin. Several of the tumors in the oral cavity, pharynx, nasopharynx, and nasal cavity had interesting courses. Some of the patients had involvement of the cervical lymph nodes alone without any subsequent involvement of the bone marrow or other parts of the body. Some of them had subsequent solitary involvement of a single area in the bone marrow of a single bone; still others had subsequent involvement of multiple bones and can be considered to have had characteristic multiple myeloma. All of these cases with extramedullary involvement, however, were slow in their progress in comparison with myeloma appearing in multiple sites in the bone at the time of first diagnosis. All of us know what a malignant lesion multiple myeloma is and that death usually follows in two or three years.

I happen to know of 2 patients, both with plasma cell tumors starting in the nasopharynx, who subsequently developed multiple bone lesions. One of these cases is reported in the literature. The patient had multiple bone lesions only fifteen years after the onset in the nasopharynx. At the time of report although he had roentgen-ray evidence of multiple foci in bones, he was perfectly well clinically and carrying on his usual occupation. The other patient some years after he developed a lesion in the nasopharynx, had multiple lesions in the bone marrow apparent by roentgen ray which I think were confirmed by biopsy. The patient is alive and well about ten years after involvement of the bone marrow. Some astonishing results in longevity sometimes can be observed in cases in which the lesion started outside the bone and only secondarily developed into multiple bone lesions.

I would like to report one other case because it is an interesting study in treatment. This woman, about 73 years of age, developed a plasma cell tumor in the nasopharynx which was treated by radiotherapy. The tumor recurred a couple of times and was treated with further radiotherapy, then disappeared and never reappeared at that site. About two years after termination of treatment, the patient fractured the femur through the upper part of the shaft. The roentgenogram showed a pathologic fracture in a large area of decalcification of the femur which was believed to be an involvement by multiple myeloma. The patient was then in pain and bedridden, and the question of how to treat her arose. The patient refused to have any more radiotherapy because she had had some unpleasant experience with its use in the nasopharynx.

It was finally determined as a palliative procedure to disarticulate the hip joint because it was anticipated that without treatment the fracture would not heal and that the patient would continue to have pain and be bedridden for the rest of her life. After disarticulation she was able to get up, was able to get around to some extent on crutches, and was free from pain. She lived for another two years. There was no autopsy and so far as I know there was no late roentgen study; therefore, I do not know whether lesions in other bones developed or not. The operation was a successful palliative procedure, however, because it enabled the patient to get up and stopped her pain.

I think multiple myeloma is a mysterious form of tumor and is well deserving of a great deal more study as to its nature and behavior. Again I will say that I believe the lesion in this case is a plasma cell tumor, in spite of the fact that not all of the cells are characteristic plasma cells.

Dr. H. W. Neidhart, Beaumont: Please discuss the term "plasmocytoma of the granulomatous type."

Dr. A. P. Stout: That is a good question. Particularly from the nasal cavity, oral cavity, and external ear, biopsy specimens of lesions in which there are a great many plasma cells are seen not too infrequently. How can we tell whether the growth is simply a granulomatous lesion in which the plasma cells are featured or whether it is a neoplasm?

My criteria are based on the number and arrangement of the plasma cells in respect to the blood vessels. If the plasma cells in a granuloma are scattered, not forming a continuous sheet, with clear areas between the groups, even though the plasma cells may be numerous, our experience has been that the lesion is not a neoplasm. The true plasmocytoma is a growth in which the plasma cells are so numerous as

to blot out almost all of the rest of the structure; blood vessels are difficult to see and the fibrous supportive framework is difficult to identify. A plasmocytoma, a true tumor, may be composed almost exclusively of differentiated plasma cells so that as a rule the histologic appearance of the individual cells does not aid. If, as in this case, the cells are so atypical that not all of them look like characteristic plasma cells, I think it is fairly certain the tumor is malignant. This picture looks not unlike the plasma cell involvement in many cases of multiple myeloma, in which certainly not all of the plasma cells are characteristic plasma cells.

FIBROUS XANTHOMA OF MASTOID REGION

CASE 19.—Contributed by Col. C. J. Lind, Brooke General Hospital, Fort Sam Houston.

Patient.—25 year old white man.

Specimen.—Postauricular tumor.

History.—The patient complained of a "swelling" behind the right ear for two months, gradually increasing in size. The excised mass was 15 by 10 by 7 mm., nonencapsulated and ovoid. The cut section revealed a grayish white homogeneous surface.

Diagnoses Submitted.—Fibrosarcoma, 2; dermatofibrosarcoma, 1; sarcoma cutis, 1; myxoma, 1; mixed salivary tumor, 1; composite tumor and dermatofibroma, 1; fibroma, 1; fibrous xanthoma, 1; dermatofibroma, 9; sclerosing hemangioma, 8.

Dr. A. P. Stout: I am not sure what is meant by sarcoma cutis, but the word sarcoma suggests a malignant tumor.

(Lantern slides.) It is a little easier to sort the elements of a growth like this with a fiber stain; it makes the various elements stand out to better advantage. However, this section with hematoxylin and eosin stain shows the growth is made up of rather small cells resembling fibroblasts, a pretty good fibrous matrix, and a fair number of capillaries. Some of them we can see; others which are probably present we cannot detect because of the diffuse nature of the growth. You would be able to detect the number of capillaries with a silver impregnation, because the capillary sheaths would then stand out clearly and could be seen even though the lumen was not demonstrable in the ordinary hematoxylin and eosin stain. I do not know how many capillaries are present but as I recall the slide, in some areas there appeared to be a fair number of capillaries. I think, too, that in some areas there are a number of foam cells which are not particularly good or easily identified. This growth is in the skin and it infiltrates. That does not mean much because all tumors of the skin infiltrate and are not encapsulated. The only exception to that is the cyst, which can have a capsule, but all solid tumors with which I am acquainted, benign and malignant, infiltrate and are not encapsulated. They may be sharply circumscribed but they are not actually encapsulated. We see that nicely here at the margin of this growth where there have been some outward extensions into the corium around the sweat glands.

I was sent two slides. One was a section stained with hematoxylin and eosin and the other a section stained with scharlach R. The earlier section from the biopsy specimen looked much like the differentiated form of a fibrosarcoma in which spindle cells and connective tissue fibers run in bands which collide at focal points with a sharp angulation of the cells and fibers to produce disturbance centers. The two slides representing a resection of the whole tumor showed the same general pattern of growth but demonstrated the presence of vacuoles in a number of cells scattered throughout. The scharlach R stain showed that the material in these vacuoles was reddened, from which it is safe to assume it was lipoid. The tumor was not very vascular and no hemosiderin was detected. The tumor lay chiefly in the skin. It infiltrated toward a fragment of the parotid gland and an adjacent lymph node, both of which lay just beneath, but it had not reached them.

This tumor, in my opinion, belongs in the category of benign skin growths featured by a matrix of fibroma or a differentiated fibrosarcomatous aspect with an admixture of phagocytic cells, presumably histiocytes, containing lipoid. A more complex variant shows a much larger number of capillaries and often hemosiderin. The latter variety is often spoken of as sclerosing hemangioma. If you read the original paper by Gross and Wohlbach[6] you will see that they were not willing to apply the name sclerosing hemangioma to all growths of this type unless a good many vessels were in them. This left me in a considerable state of confusion because I do not know exactly where to draw the line in using their term "sclerosing hemangioma." I notice that a number of you used it in this connection, but if you follow what Gross and Wohlbach said, I do not think you ought to use that term for this tumor. It is not of any clinical importance. The important thing to recognize is that the tumor is a nonmetastasizing, benign growth.

It has seemed to me, since the growth has lipoid-containing cells, preferable to call it a fibrous xanthoma, but I do not insist on that term. I shy away from sclerosing hemangioma for the reason which I stated—that I do not know when and when not to use it. If you recall, Gross and Wohlbach were of the opinion that the presence of cells containing lipoid was not the significant feature of the growth. They felt that the significant features were the vascular elements, and, of course, they assumed that the hemosiderin came from the blood, from those vessels; the xanthoma cells they just ignored as of no particular

importance. I do not think the xanthoma cells are of any particular importance either.

These growths seldom become large. I have seen them grow to a considerable size, but it is very rare. Most of them are small, and this one measured only 1.5 by 1 by 0.7 cm., which is about average. As far as I know, no example of malignant tumor has been described as coming from such a growth as this. I have no quarrel at all with calling it sclerosing hemangioma; I know that is the popular diagnosis. I am just stubborn about the name I use for it, but agree with everybody that it is entirely benign.

Dr. C. T. Ashworth, Fort Worth: Do you recognize a benign fibrous tumor or fibroma of the subcutaneous or other soft tissues other than dermis?

Dr. A. P. Stout: Yes, I think tumors which I would be willing to call fibroma involve the subcutaneous tissue and not the dermis at all. They are rare but I have seen them and am willing to recognize them as such.

What I call these tumors depends on the clinical course. If there is a small tumor—a fibroma—which is observed to be small when it is taken out, which shows the characteristic features, and which does not recur, the diagnosis of fibroma may stand. If the tumor is not removed but continues to progress until it is from 4 to 8 cm. or larger, although it maintains the same histologic appearance as the small tumor, my inclination is to call the growth a differentiated fibrosarcoma. Probably that is a silly way to use these terms.

If any criterion would enable us to recognize which of the small tumors were going to stop growing, we might distinguish between the two. However, the ones that continue to grow not only infiltrate the tissues but extend outward in the surrounding tissues so that they are much more difficult to eradicate than the ones which remain small. The small ones can be excised without subsequent recurrence. The big ones recur if their margins are approached; the reason I classify them as differentiated fibrosarcomas is because they tend to continue their infiltrative growth. We have seen such differentiated tumors, after unsuccessful attempts to excise them, cause death without metastasis because of their extent and penetration. That seldom happens, but it is a possibility.

Dr. Ashworth: How do you differentiate between dermatofibrosarcoma protuberans and dermatofibroma?

Dr. A. P. Stout: I presume "dermatofibroma" is the terminology of the French dermatologist, Darier. Hoffman's name is associated with dermatofibrosarcoma protuberans, and I think it is Darier with dermatofibroma, only he did not stop with calling it dermatofibroma; he called it chronic recurring dermatofibroma.

Histologically they look alike. The only reason for using different names is that the dermatofibroma protuberans forms multiple nodules, usually amalgamated together, whereas the solitary recurring dermatofibroma is a single nodule. So far as I know, that is the only difference and the two otherwise behave exactly the same. They do not metastasize but show persisting infiltrative growth that has to be eradicated widely or they will not be cured.[18]

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PSYCHOSOMATIC ILLNESS IN GENERAL PRACTICE

G. CON SMITH, M.D., Mexia, Texas

SINCE the early days of written history, there have been evidences of the physician's awareness of mental health. Shakespeare[2] gave the world a record of his insight into human behavior when he wrote, "Cassius has that lean and hungry look; he thinks too much." Explanations of what has been wrongly called "the imaginary complaint" by altered glandular or chemical balance or upon an organic basis hold little water since Freud, Adler, and others led the way to new and better understanding of such conditions.

Every practitioner of medicine has a large volume of patients whose symptoms are unrelated to any structural organic change or to any demonstrable physiologic impairment. It is to be regretted that many of the irregular practitioners have thriving practices because the medical doctor as a keystone of psychotherapeutics in the community has not exercised proper methods.

Since entering general practice, I have become aware of the vicissitudes encountered in conducting a busy practice and still trying to allow sufficient time for the patient suffering from a neurosis or a psychosomatic complaint. Physicians have been carried along with the rest of the aggressive social movement. The machine age has created this monster of imbalance between advanced, objective, scientific intelligence and moral and social imbecility. Physicians' offices follow the trend toward mass production. And, as with all of our Homosapiens brothers, rationalization comes to aid our stricken consciences and time is the excuse.

It is not within the scope of this paper to outline the steps or the evolution leading to this age of quasi-mass hysteria. It is sufficient to point out that our environment, more than ever before, produces insecurity. This insecurity is registered in the physical behavior of our bodies. One needs only to know that half or more of the hospital beds in the country are filled with mental patients to realize that present-day society is producing a nightmare of emotions which repressed soon blow the safety valve.

Two case histories are herewith recorded. They are not unusual. They were chosen at random from one day and were interspersed between respiratory infections, obstetric cases, and the usual stream of complaints which come to a general practitioner. Emphasis is placed on the time element. A physician who carefully and tactfully guides the flow of conversation will be impressed by the number of ideas which can be expressed in a short period.

CASE 1.—Mr. A. L., aged 23, was a junior in college whose chief complaint was headache and an inability to concentrate on his studies. He professed to have poor digestion, and questioning brought out a multitude of bizarre complaints. He added that he was nervous. Physical examination revealed nothing significantly abnormal.

The patient was taken from the examining room into the private interviewing room and seated in the most comfortable chair. The offer of a cigaret encouraged him to talk, since he knew that it takes from five to eight minutes to smoke a cigaret and therefore that I was in no great hurry.

The patient was willing to expound on his school life, his home, and his relationships with his fellow students. Not by asking leading questions but by directing the conversation along contributory lines, I helped him to enjoy eighteen minutes of mental catharsis. He revealed that his family were stern Baptists. A brother had become a minister of the church and his family was eager for him also to become a minister. He wanted to please his family but there were many things he did not like about the calling. He discussed these disturbing points, and thus the conflict was bared. Ultimately, through five interviews lasting from twenty to forty minutes each, the patient was able to find great relief from his tension.

DISCUSSION

There is a great tendency on the part of many physicians to "get this darned neurotic out of the office as rapidly as possible." This result is often easy to accomplish because most such persons are willing to accept a quick verdict which will explain their troubles on an organic basis. Using the iatrogenic approach[1] and thus creating disorders is a good way for a physician to see the most patients in the shortest time and do the most harm of any doctor in the community.

Naturally, it is only wise to select the patients who really want help. The results sometimes are disappointing when the complaints have been concreted through fifteen years of "Dr. Sawbones I. Atros."

It is important to remember not to hurry the mental catharsis of the patient too much. If it were possible for physicians to do a partial, temporary laryngectomy on themselves, the 50 per cent or more of their patients who suffer from conflict, fear, frustration, anxiety, hostility, and resentment would find a medium of expression.[3]

Arriving at a functional diagnosis by exclusion is often unnecessary and often dangerous. The pattern is frequently so typical that such exclusion is superfluous. Sometimes, however, especially in highly intellectual and emotional people, a gamut of clinical investigation is necessary before any degree of approachability develops.

Once the diagnosis of functional or neurotic illness is established, the physician should try to interview the patient away from his desk. The appearance of the doctor behind a desk may create for the patient a visual image of being judged and may often impede the progress of the interview.

CASE 2.—A white woman, aged 26, married, with two children aged 4 and 2, entered the office in an apparently disturbed state. She wrung her handkerchief as if to squeeze water from it, and moved her extremities many times in a meaningless manner. The chief complaints were frequency of urination and pain in the lower abdomen. The illness dated back for twelve years, at which time she began to menstruate with irregularity and pain. The patient complained of dyspareunia. Seven weeks previously she had had a pelvic laparotomy with the removal of one salpinx and some "cysts." She had been told on her rounds of the doctors that she had kidney trouble, female trouble, low blood pressure, and anemia; one doctor had told her she was just nervous. The operation did not help her complaints.

Physical examination revealed no significant abnormality. A well healed incision was present in the lower part of the abdomen.

The patient was somewhat skeptical about a "talking" kind of treatment; however, a further interview at an hour more accommodating to me revealed that she had had a very unhappy childhood, going from one relative to another. Her father and mother had died when she was of preschool age. She had never known love and had been reared in an atmosphere of economic insecurity. Her education was incomplete and afforded her limited opportunity. She married after a three day courtship and found little more in her marriage than she had had before. After the third interview, she said that she was feeling much better. A total of five hours at eight separate interviews was accorded this patient.

Reward may never be great. Results may never be as spectacular or dramatic as the glucose injection in insulin shock. Yet there is a personal triumph in saving a patient from the clutches of the charlatan or diverting him from the overly-ambitious efforts of the colleague who pursues his livelihood through extreme or radical or unneeded surgery.

I have listened often to the arguments of some of my colleagues and some general practitioners that emotional sickness is a problem for the psychiatrist and does not fall within the domain of the practicing physician. This would be practical if 40,000 psychiatrists were fairly well distributed throughout the population and from 50 to 60 per cent of the flow of patients into physicians' offices might be referred to them. But such is not the case. Even if there were enough psychiatrists, many patients would not seek advice from this source. The medical practitioner must accept the demand and begin to satisfy the need for emotional relief of disturbed and anxious people. Although physicians have become somewhat adept in treating pneumonia and appendicitis, the great volume of the people we see receive little or no benefit. We physicians must do our best to remain humble and remain ever aware that those who come to us, come with a trust in the intelligence and dignity of the medical profession.

SUMMARY

Two typical cases of psychosomatic complaints are presented with a short discussion of the emotional problem involved and a method of procedure outlined. Special emphasis is placed on the time necessary for superficial psychotherapy. An attempt is made to impress the medical practitioner that a busy practice can be compatible with such a regime. Attention is drawn to physician-caused ailments, and the general practitioner is implored to recognize his responsibility in dealing intelligently with emotional sickness.

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Warning About Poisonous Insecticides

A warning about the poisonous nature of insecticides, and especially of two of the newer substances, was issued in an editorial in *The Journal of the American Medical Association* on May 26.

The two insecticides mentioned are aldrin and dieldrin, which are expected to be used widely, especially in the southern and cotton-raising areas, the editorial states.

Available in either powdered form or as emulsified concentrates, the powdered products can be absorbed in inhalation, through the skin, or by swallowing. The concentrates or emulsions also are readily absorbed by the body because of the solvents used in their preparation.

Aldrin and dieldrin act primarily on the central nervous system or gastrointestinal system. Taken by mouth, either by accidental swallowing or eating produce which has been sprayed recently, the insecticides probably will cause nausea and vomiting, hyperirritability, and convulsions. Death may result. It was advised that if the skin has been contaminated with the chemicals, the area should be washed thoroughly with soap and water. At present there is no universally accepted method of treatment for this type of poisoning. Treatment depends to some extent on the symptoms and could include barbiturate therapy, dextrose, amino acids, and oxygen.

SULFAMYLON HYDROCHLORIDE SOLUTION WITHDRAWN

Winthrop-Stearns, Inc., has ordered all physicians and patients to discontinue use of its Sulfamylon Hydrochloride, 1 per cent solution, because contamination was detected in some shipments. A spokesman for the Food and Drug Administration said infections developed in the eyes of 4 patients treated with the solution at a factory in Lynn, Mass. Examination of the solution confirmed contamination. Winthrop-Stearns, Inc., urged return of bottles of 1 per cent solution, stating that all other forms of Sulfamylon are safe to use.

CASE REPORTS

PERFORATED MECKEL'S DIVERTICULUM

W. BURGESS SEALY, M.D., Fort Worth, Texas

A MECKEL'S diverticulum of the ileum has been reported as being present in from 2 to 3 per cent of autopsies; whereas Balfour reported 15 Meckel's diverticula in 11,107 abdominal operations, McGlannan reported only 3 in 14,000 such operations. Obviously, Meckel's diverticulum is not a common cause of intraperitoneal disease. This case is reported because of the symptoms which a Meckel's diverticulum produced in an infant 5½ months of age.

Haber has classified the pathologic condition of Meckel's diverticulum into: (1) the inflammatory type, (2) the type causing obstruction of the intestinal canal, (3) the type with peptic ulceration, (4) the type with a tumor. The case herewith presented was probably one accompanied by peptic ulceration with perforation.

CASE REPORT

M. R. W., a 5½ month old boy, was admitted March 26, 1948, to Harris Hospital, Fort Worth. Twelve hours before, he had awakened and fretted some but did not cry; however, he was apparently agitated and refused the bottle. The mother gave him an enema which did not return; a second enema was given with similar results.

The patient was admitted to the hospital the following day with abdominal tenderness and very active peristalsis but with abdominal distention. The left side of the scrotum had a dark reddish hue and was extremely tender, as was the abdomen.

The blood count revealed 12,400 white blood cells with a differential count of 54 segmented cells, 15 stab cells, 25 lymphocytes, and 6 monocytes. There were 4,300,000 red blood cells with 11.2 Gm. hemoglobin.

Wangensteen suction, penicillin, and abdominal hot packs were instituted. The next day the temperature reached 102 F. rectally, and there were no peristaltic sounds. On the third hospital day the patient looked considerably better. Peristalsis was returning and a mass was beginning to form in the right lower quadrant of the abdomen. The patient had two dark greenish stools with what appeared to be a few strands of tarry material. The next day, March 29, he appeared considerably stronger; the mass was definite and peristalsis was active. The diagnosis was thought to be either a localized abscess secondary to a perforated appendix or an intussusception. The patient had another dark green stool and the scrotum was still edematous and red on the left side. It was believed that he was ready for surgery. Accordingly, under open drop anesthesia, a Battle incision was made in the right side of the abdomen. The cecum was found and no intussusception was noted; however, there was a mass posterior and just medial to the cecum and behind the ileum. The first loop of ileum proximally was wrapped around an abscess which was ruptured. The abscess was odorless and had a bloody fluid. Some gangrenous, thick exudate overlay the tip of the appendix. The appendix was free in the cavity for the most part and it was surrounded by considerable gangrenous exudate. The base of the appendix was normal.

An appendectomy was done in the usual manner, with inversion of the stump. No other site for the abscess could be found, although no gross perforation in the appendix was seen. The wound was closed in the usual manner and a Penrose drain from the abscess cavity placed through a separate stab wound to the right of the incision. A Meckel's diverticulum was not sought for, as the abscess cavity was not near the small bowel but against the mesentery near its root. The patient seemed to withstand the operation well.

The pathologic report was as follows: Sections throughout the appendix showed extensive neutrophilic infiltration of all layers. The pattern, however, was most prominent in the serous coat in which there were extensive deposits of fibrin and blood. The layers of the serous coat, however, appeared intact.

The patient had an uneventful recovery in that his temperature was essentially normal in seventy-two hours and remained so throughout the rest of his hospital stay. Considerable purulent and red, blood-tinged fluid drained from the abscessed cavity through the stab wound. The patient was dismissed April 11, 1948, at which time the wound was well healed, the drains were out, and a slight amount of odorless, blackish material was draining from the stab wound. No tenderness was present in the region of the incision or the stab wound.

Second Operation

The parents of the patient moved out of town shortly thereafter and were not seen or heard from until August 30, 1948, at which time the patient was 9½ months old. He was admitted to the hospital immediately after being examined, with the history that he had not gained weight and had grown weaker and that evidence of multiple lymphadenopathies in the groins, axillas, and neck had been noted. In the region of the appendectomy scar a tender mass had developed, which would spontaneously reduce to a point at which it was imperceptible to palpation. The patient in the preceding two and one-half months had had many bouts of fever which lasted three or four days at a time, sometimes rising to 103 F.

Physical examination at this time revealed an extremely emaciated child manifesting the previously mentioned findings with the exception that he was fever-free. The blood count revealed 11,100 white blood cells, with a differential count of 35 segmented cells, 7 stab cells, 6 eosinophils, 1 basophil, 43 lymphocytes, and 8 monocytes. There were 2,980,000 red blood cells with 5.2 Gm. of hemoglobin. The reticulocyte count was 2.1 per cent, and the Cuttler's sedimentation rate 32 mm. per hour. The urinalysis was essentially normal.

Read before the Section on Surgery, State Medical Association of Texas, Annual Session, Fort Worth, May 2, 1950.

The patient was given three transfusions of 175 cc. of whole blood each and other supportive measures were instituted. On September 7, 1948, under open drop ether anesthesia, a secondary incision was made, excising the old scar in the right rectus muscle. Upon exploration of the abdominal cavity, it was found that several loops of the small bowel were lying anteriorly and laterally to the ascending colon. The cecal region was entirely free of any inflammatory reactions or adhesions. These adherent, firm, and hard loops of small bowel comprised the mass which had been felt preoperatively. With both blunt and sharp dissection, they were separated from the right anterior and lateral abdominal walls and a Meckel's diverticulum about 8 cm. long which had perforated onto the abdominal wall was discovered. In this region was a granulomatous chronic abscess which in turn had perforated into a loop of the ileum about 10 or 12 inches proximal to the diverticulum. The loops of the ileum were freed, and after being enlarged slightly longitudinally, the hole in the ileum was closed by suturing transversely with one row of continuous 000 chromic catgut and two rows of interrupted 000 silk. The Meckel's diverticulum was freed further and amputated at its base, and the stump was closed in the usual manner, using one row of 000 chromic and two rows of interrupted silk.

The diverticulum had a peculiar blood supply in that the omphalomesenteric vessels were rather long and did not derive from the mesentery at the level of the diverticulum. The free lying loop of blood vessels about 8 or 10 inches long entered the apex of the diverticulum and came from the mesenteric vessels proximal to the level of the ileum from which the diverticulum arose.

Considerable oozing and spillage, of course, from the granulomatous area was encountered, although the general peritoneal cavity was fairly well protected. The abdomen was closed in the usual manner; however, silk was used throughout, except for plain catgut on the skin.

The pathologic report gave evidence of a markedly inflamed Meckel's diverticulum showing ectopic gastric glands. The cultures made from the abscessed cavity revealed a heavy growth of Aerobacter aerogenes and a moderate growth of nonhemolytic Streptococcus.

During the operation the patient received about 400 cc. of blood; he was given another 100 cc. in the recovery room. He seemed to have withstood the operation fairly well and at no time portrayed any evidence of shock, cyanosis, or sweating. The prognosis was bad.

For the next thirty-six hours, the temperature ranged from 103 to 104 F. rectally but in forty-eight hours it was normal and remained so. The patient had an uneventful convalescence and on September 9, had a spontaneous bowel movement. On September 10, the Wangensteen suction was removed and the patient began oral feedings. He was dismissed September 18, 1948, at which time the abdominal wound was well healed; since then he has had no further difficulty. However, he continues to have a drainage of mucous secretions from the umbilicus, apparently a remnant of an open urachal pouch, a condition which he has had since birth.

SUMMARY AND CONCLUSION

A case of perforated Meckel's diverticulum of the small bowel in an infant 5½ months of age is presented.

In any obscure intraabdominal lesion, a Meckel's diverticulum should always be considered, because patients with this type of diverticulum may not necessarily have bright red blood in the stool; if they bleed and do not have diarrhea, the blood may be dark. The symptoms caused by a Meckel's diverticulum may be those of intussusception, simple obstruction of the small bowel, massive intestinal hemorrhage, appendicitis, or rupture of a hollow viscus.

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ABSTRACT OF DISCUSSION

DR. A. O. SINGLETON, JR., Galveston: We recently had a case similar to Dr. Sealy's in which a persistent vitelline duct running from the umbilicus was continuous with the appendix. Five similar cases have been reported in the literature.

Since most vitelline ducts have their bowel attachment in the ileal region, some have believed that in the aforementioned cases, appendices were present in a herniation in the umbilical cord and were tied off with the cord at birth. In some reported cases the juncture of the duct with the appendix has been end-to-side, a phenomenon which is difficult to explain by this latter theory.

PENICILLIN OINTMENT IN EYES OF NEWBORN

The use of penicillin ointment in the eyes of newborn babies instead of the silver nitrate solution now being used is advocated by Drs. H. H. Davidson and N. J. Eastman and Sanitarian Justina H. Hill of Baltimore, writing in the April 7 issue of *The Journal of the American Medical Association*.

The doctors express the opinion that in states where silver nitrate is required by law, regulations governing the use of silver nitrate should be changed to permit using penicillin ointment when the physician prefers it to silver nitrate. Recommendation of the use of penicillin ointment by the doctors is on the basis that, in their opinion, it is the safest and least irritative agent for the purpose. Two other points in favor of the change are that the cost is approximately the same and the ointment is easier to use than silver nitrate.

1950 HOSPITAL SERVICE SETS RECORD

American hospital service in 1950 reached an all-time high mark, according to the annual report of hospital data released by the Council on Medical Education and Hospitals of the A.M.A in the May 12 issue of *The Journal of the American Medical Association*.

A total of 17,023,513 patients, representing one new patient every 1.8 seconds, was admitted. Nongovernmental hospitals accounted for 304,955 of the increase over 1949 and federal, state, county, and city institutions for 58,585.

The report, covering 6,430 registered hospitals in the United States, excluded 299 hospitals which failed to supply data in 1950 but which accounted for about 260,000 admissions and 1.5 per cent of the services rendered in 1949.

USE OF POLYETHYLENE CATHETER FOR PROLONGED TUBE FEEDING

FRANCIS C. USHER, M.D., Houston, Texas

THE irritating effect of rubber feeding tubes which are left in place for periods exceeding a week is well known. Aside from the growing intolerance of the patient to the tube, ulceration and erosion of the mucosa of the nasopharynx and esophagus may be caused. Holinger[6] recently reported 4 cases of laryngeal stenosis caused by prolonged use of rubber feeding tubes and found 24 similar cases in the literature. Fortunately, tube feeding is usually not required beyond a period of from one to two weeks, but occasionally prolonged feeding by this route is necessary unless gastrostomy is elected.

Ingraham[7] first called attention to the physical properties of polyethylene and suggested clinical use of the plastic. Later, Ingraham[8] and Brown[1] showed by animal experimentation and by clinical use that pure polyethylene has no irritating properties when implanted in living tissues. They recommended it as a dural substitute in neurosurgery.

Myer,[10] Guenther,[5] and MacFadyen[11] described the use of polyethylene tubing for venoclysis and called attention to the absence of thrombosis when the tubing was used for long periods. Ferris[3] used polyethylene tubing for ureterostomies, nephrostomies, and cystostomies for prolonged periods with a notable absence of encrustations so common with rubber tubing. Grindlay[4] described the technique of molding polyethylene tubes and suggested various uses for the tubing in surgery. Kaslow[9] used a plastic 14 to 16 French tube (Koroseal) for gastrointestinal drainage and commented on how well the tube was tolerated.

The polyethylene catheter* as designed by Diamond[2] was intended for replacement transfusions in infants and for constant intravenous therapy in older children and adults; it measures .047 inch inside diameter and .067 inch outside diameter. An 18 gauge intravenous needle may be attached by insertion into its lumen.

I recently have used this catheter for prolonged gastric tube feeding with such success that I believe it warrants reporting. No other similar instances of prolonged tube feeding were found in a review of the literature.

CASE REPORTS

CASE 1.—N. D., a 56 year old white man, was first seen August 3, 1949, having been referred for gastrostomy. His complaint was painful swallowing. He was unable to eat solid foods, and liquids were swallowed with great difficulty.

His past history revealed that he had had a laryngofissure performed in July, 1948, for a carcinoma of the right vocal cord. In April, 1949, he was observed to have a local recurrence. A tracheotomy was done April 28 in anticipation of postirradiation edema, and during May the patient received 6,000 r units of roentgen ray to the anterior aspect of the neck as a palliative procedure. About six weeks after completion of roentgen therapy, he noticed difficulty in swallowing which became progressively worse; when seen August 3 he was able to swallow only liquids, suffering such pain in so doing that he carried a container and expectorated saliva to avoid swallowing.

On August 5, an 18 gauge polyethylene catheter was inserted as a nasogastric feeding tube. The patient was able to swallow the tube without difficulty. A 3,000 calorie formula composed of homogenized milk, protein hydrolysate (Somogen), and cane sugar with vitamin supplements was prescribed, 750 cc. being given three times daily. The feedings were administered with a 50 cc. syringe and an 18 gauge cannula. Because of the viscosity of the mixture and the small diameter of the plastic tube, injection was somewhat difficult, but the patient's daughter soon learned a technique of handling the syringe which made the process easier. It was necessary to flush the tubing with water at the completion of each feeding to prevent clogging.

On December 11, 1949, the patient died of carcinoma; from August 3 until December 11 he had been tube fed in the manner described. He was ambulatory until a few days before his death and suffered no discomfort or irritation from the tube. Other than an occasional swallow of water, he took nothing by mouth. Twice during the four month period the tube had to be replaced because of breakage due to excessive bending, but no difficulty was encountered in reinserting new tubes.

Examination of the nasopharynx, esophagus, and stomach at autopsy revealed no ulceration or erosion caused by the prolonged use of the tube.

CASE 2.—T. J., a 54 year old Negro man, was first seen December 31, 1949, with the complaint of a rapidly growing ulcer on the right border of the tongue. The ulcer had been present for three months and on examination was found to be 2 cm. in diameter extending onto the floor of the mouth. A few small lymph nodes were palpable in the right submaxillary area but none elsewhere in the neck. A biopsy showed the lesion to be a squamous cell carcinoma.

On January 5, 1950, a complete radical neck dissection was performed on the right side followed in two weeks by fulguration of the primary lesion and radium implantation. A tracheotomy was also established at this time. Recovery from these procedures was uneventful.

On July 12, 1950, the patient was observed to have a large fixed lymph node in the left cervical region which was believed to be metastatic carcinoma, and considerable induration of the floor of the mouth was present. Palliative roentgen therapy was administered to both sides of the neck. His tracheotomy was still functioning satisfactorily. In October he developed considerable dysphagia from the recurrent tumor and irradiation edema and swallowed liquids with difficulty.

On October 28 an 18 gauge polyethylene catheter was passed without difficulty as a nasogastric feeding tube. A 2,500 calorie formula composed of homogenized milk and

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**Tubing is obtainable from the Suprenant Electrical Insulation Company, 199 Washington Street, Boston.*

whole milk powder (Klim) with vitamin supplements was administered, 750 cc. being given three times a day. The formula was administered by the patient's wife, using a 50 cc. syringe and an 18 gauge cannula. Feedings were continued without interruption until his death December 25, 1950. During this two month period of gavage the patient was unable to take food or drink by mouth because of extreme dysphagia, and he did not complain of any irritation or discomfort from the tube. It had to be replaced once because of a break, but reinsertion of a new tube was accomplished with ease. The patient was ambulatory until a few days before his death.

COMMENT

The complications following the use of rubber feeding tubes for periods of more than a week have been amply demonstrated. A review of the literature showed no instances of prolonged tube feeding employing the polyethylene catheter.

Two cases are reported in which tube feeding with the polyethylene catheter was maintained for four-month and two-month periods with no erosion or ulceration of the pharynx or esophagus and with no discomfort to the patient. The small diameter of the tube and the ease with which it was passed in the presence of considerable edema of the throat suggests that it might be used for feeding in benign and malignant strictures of the esophagus.

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NEWS

COMING MEETINGS AND CLINICS

Texas Medical Association, Dallas, May 4-7, 1952. Dr. Allen T. Stewart, Lubbock, Pres.; N. C. Forrester, 700 Guadalupe St., Austin, Acting Executive Secy.

American Medical Association, Los Angeles, Dec. 4-7, 1951. Dr. John W. Cline, San Francisco, Calif., Pres.; Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secy.

NATIONAL AND REGIONAL

American Academy of Allergy. Dr. Walter S. Burrage, Milwaukee, Pres.; Mr. James O. Kelley, 208 E. Wisconsin Ave., Milwaukee 2, Executive Secy.

American Academy of Dermatology and Syphilology. Dr. Donald M. Pillsbury, Philadelphia, Pres.; Dr. John E. Rauschkolb, 25 Prospect Ave., N. W., Cleveland 15, Secy.

American Academy of General Practice, Atlantic City, March 24-27, 1952. Dr. Jason P. Sanders, Shreveport, La., Pres.; Mr. Mac F. Cahal, 406 W. 34th St., Kansas City 2, Executive Secy.

American Academy of Neurological Surgery. Dr. William S. Keith, Toronto, Canada, Pres.; Dr. T. C. Erickson, 1300 University Ave., Madison 5, Wis., Secy.

American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 14-18, 1951. Dr. Derrick Vail, Chicago, Pres.; Dr. W. L. Benedict, 100 First Ave. Bldg., Rochester, Minn., Secy.

American Academy of Pediatrics, Toronto, Oct. 20-25, 1951. Dr. Paul W. Beaven, Rochester, N. Y., Pres.; Dr. C. G. Grulee, 636 Church St., Evanston, Ill., Secy.

American Association for Thoracic Surgery. Dr. Alfred Blalock, Baltimore, Pres.; Dr. Brian Blades, 901 23rd St. N. W., Washington, D. C., Secy.

American Association of Genito-Urinary Surgeons. Dr. Roger C. Graves, Boston, Pres.; Dr. Norris J. Heckel, 122 S. Michigan Ave., Chicago 3, Secy.

American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Hot Springs, Va., Sept. 6-8, 1951. Dr. James K. Quigley, Rochester, N. Y., Pres.; Dr. William F. Mengert, 2211 Oak Lawn Ave., Dallas, Secy.

American Cancer Society. Dr. Guy Aud, Louisville, Ky., Pres.; Mr. M. R. Runyon, 47 Beaver St., New York, Exec. Vice-Pres.

American College of Allergists. Dr. John H. Mitchell, Columbus, Ohio, Pres.; Dr. Fred W. Wittich, 423 La Salle Medical Building, Minneapolis 2, Secy.

American College of Chest Physicians. Dr. Chevalier L. Jackson, Philadelphia, Pres.; Mr. Murray Kornfeld, 500 N. Dearborn St., Chicago 10, Executive Secy.

American College of Physicians, Cleveland, April 21-25, 1952; regional meeting, New Orleans, Feb. 15-16, 1952. Dr. Maurice C. Pincoffs, Baltimore, Pres.; Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Secy.

American College of Radiology. Dr. C. Edgar Virden, Kansas City, Mo., Pres.; Mr. W. C. Stronach, 20 N. Wacker Drive, Chicago 6, Executive Secy.

American College of Surgeons, San Francisco, Nov. 5-9, 1951. Dr. Henry W. Cave, New York, Pres.; Dr. Paul B. Magnuson, 40 E. Erie St., Chicago 11, Secy.

American Congress of Physical Medicine, Denver, Sept. 3-8, 1951. Dr. Arthur L. Watkins, Boston, Pres.; Dr. Richard Kovacs, 2 E. 88th St., New York 28, Secy.

American Dermatological Association. Dr. Edward A. Oliver, Chicago, Pres.; Dr. L. A. Brunsting, 102 2nd Ave., S. W., Rochester, Minn., Secy.

American Gastro-Enterological Association. Dr. John G. Matter, Detroit, Pres.; Dr. Dwight L. Wilbur, 655 Sutter St., San Francisco, Secy.

American Gynecological Society, Hot Springs, Va., May, 1952. Dr. Walter T. Dannreuther, New York, Pres.; Dr. John I. Brewer, 104 S. Michigan Ave., Chicago, Secy.

American Hospital Association. Dr. Charles F. Wilinsky, Boston, Pres.; Mr. George P. Bugbee, 18 E. Division St., Chicago, Executive Secy.

American Laryngological, Rhinological, and Otological Society. Dr. Gordon B. New, Rochester, Minn., Pres.; Dr. Louis H. Clerf, 1530 Locust St., Philadelphia, Secy.

American Neurological Association. Dr. Wilder Penfield, Montreal, Canada, Pres.; Dr. H. Houston Merritt, 710 W. 168th St., New York 32, Secy.

American Ophthalmological Society. Dr. John H. Dunnington, New York, Pres.; Dr. M. C. Wheeler, 30 W. 59th St., New York 19, Secy.

American Orthopedic Association. Dr. James S. Speed, Memphis, Pres.; Dr. C. Leslie Mitchell, Henry Ford Hospital, Detroit 2, Secy.

American Pediatric Society. Dr. Bronson Crothers, Boston, Pres.; Dr. Henry G. Poncher, 1819 W. Polk St., Chicago 12, Secy.

American Proctologic Society. Dr. Hoyt R. Allen, Little Rock, Pres.; Dr. W. Wendell Green, 1838 Parkwood Ave., Toledo 2, Secy.

American Psychiatric Association, Atlantic City, May 12-16, 1952. Dr. Leo H. Bartemeier, Detroit, Pres.; Dr. R. Finley Gayle, 501 E. Franklin St., Richmond, Va., Secy.

American Public Health Association, San Francisco, Oct. 29-Nov. 2, 1951. Dr. W. P. Shepard, San Francisco, Pres.; Dr. R. M. Atwater, 1790 Broadway, New York 19, Secy.

American Society of Anesthesiologists, Washington, D. C., Nov. 5-8, 1951. Dr. Urban H. Eversoll, Boston, Pres.; Dr. J. E. Remlinger, Jr., 188 W. Randolph St., Chicago, Secy.

American Society of Clinical Pathologists, Chicago, Oct. 13-20, 1951. Dr. F. William Sundermann, Atlanta, Ga., Pres.; Dr. Clyde G. Culbertson, Indiana University School of Medicine, Indianapolis, Secy.

American Surgical Association. Dr. Daniel C. Elkin, Atlanta, Pres.; Dr. Nathan Womack, University of Iowa, Iowa City, Secy.

American Urological Association. Dr. Thomas D. Moore, Memphis, Tenn., Pres.; Dr. C. H. deT. Shivers, 121 S. Illinois Ave., Atlantic City, N. J., Secy.

Association of American Physicians and Surgeons, Indianapolis, Oct. 4-6, 1951. Dr. Lawrence Shinabery, Fort Wayne, Ind., Pres.; Mr. Harry E. Northam, 360 N. Michigan Ave., Chicago 1, Executive Secy.

International College of Surgeons, U. S. Chapter, Chicago, Sept. 10-13, 1951. Dr. H. W. Meyerding, Rochester, Minn., Pres.; Dr. Arnold S. Jackson, 1516 Lake Shore Drive, Chicago, Secy.

National Tuberculosis Association. Dr. Alton S. Pope, Boston, Pres.; Dr. James E. Perkins, 1790 Broadway, New York 19, Managing Director.

Radiological Society of North America, Chicago, Dec. 3-7, 1951. Dr. John S. Bouslog, Denver, Pres.; Dr. D. S. Childs, Medical Arts Bldg., Syracuse 2, N. Y., Secy.

Southern Medical Association, Dallas, Nov. 5-8, 1951. Dr. Curtice Rosser, Dallas, Pres.; Mr. C. P. Loranz, 1020 Empire Bldg., Birmingham, Ala., Secy.

Southern Psychiatric Association. Dr. R. Burke Suitt, Durham, N. C., Pres.; Dr. Newdigate M. Owensby, Medical Arts Bldg., Atlanta, Ga., Secy.

Southern Surgical Association, Hot Springs, Va., Dec. 4-6, 1951. Dr. Frank C. Wilson, Birmingham, Ala., Pres.; Dr. John C. Burch, 2112 West End Ave., Nashville, Tenn., Secy.

Southwest Allergy Forum, Dallas, March, 1952. Dr. C. B. Shuey, Dallas, Pres.; Dr. James Holman, Medical Arts Bldg., Dallas, Secy.

Southwest Regional Cancer Conference, Fort Worth, Sept. 13, 1951. Secy., 209 Medical Arts Bldg., Fort Worth.

Southwestern Medical Association, El Paso, Oct. 18-20, 1951. Dr. L. W. Breck, El Paso, Pres.; Dr. W. W. Schuessler, 1415 First National Bank Bldg., El Paso, Secy.

Southwestern Surgical Congress, St. Louis, Sept. 24-26, 1951. Dr. Leo J. Starry, Oklahoma City, Pres.; Dr. C. R. Rountree, 1227 Classen, Oklahoma City 3, Secy.

Tri-State Medical Assembly, Marshall, Sept. 26-27, 1951. Dr. W. S. Terry, Jefferson, Pres.; Dr. James Harris, Marshall, Secy.

United States-Mexico Border Public Health Association. Dr. Luis Arriaga Velez, Chihuahua, Mexico, Pres.; Dr. M. F. Haralson, 314 U. S. Court House, El Paso, Secy.

STATE

Texas Academy of General Practice, Houston, Sept. 10-11, 1951. Dr. Andrew S. Tomb, Victoria, Pres.; Dr. B. H. Bayer, 104 E. Twentieth St., Houston, Secy.

Texas Academy of Internal Medicine, Galveston, Dec. 8-9, 1951. Dr. W. L. Marr, Galveston, Pres.; Dr. John S. Chapman, 3810 Swiss Ave., Dallas, Secy. Meetings restricted to members.

Texas Air-Medics Association. Dr. W. M. Pratt, Houston, Pres.; Dr. J. S. Minnett, 2512 Welborn, Dallas, Secy.

Texas Association of Obstetricians and Gynecologists, Austin, Feb. 8-9, 1952. Dr. S. Foster Moore, San Antonio, Pres.; Dr. Carey Hiett, 603 College Ave., Fort Worth, Secy.

Texas Chapter, American College of Chest Physicians, Dallas, May 5, 1952. Dr. J. E. Dailey, Houston, Pres.; Dr. Howard Smith, 3215 Exposition Blvd., Austin, Secy.

Texas Club of Internists. Dr. Ghent Graves, Houston, Pres.; Dr. Hatch W. Cummings, Jr., 203 Hermann Professional Bldg., Houston, Secy.

Texas Dermatological Society. Dr. W. H. Connor, Houston, Pres.; Dr. C. H. McCuistion, Capital National Bank Bldg., Austin, Secy.

Texas Diabetes Association, Dallas, May 4, 1952. Dr. D. W. Carter, Jr., Dallas, Pres.; Dr. Ivan Mayfield, 1312 Main, Lubbock, Secy.

Texas Division, American Cancer Society, Fall, 1951. Mr. Frank C. Smith, Houston, Pres.; Mr. J. Louis Neff, 2307 Helena St., Houston 6, Executive Director.

Texas Heart Association, Dallas, May 5, 1952. Dr. Paul V. Ledbetter, Houston, Pres.; Miss Roberta Miller, 411 Reserve Loan Life Bldg., Dallas, Executive Secy.

Texas Hospital Association, Houston, May 20-22, 1952. Mrs. Ruby B. Gilbert, Temple, Pres.; Mrs. Ruth Barnhart, 2210 Main St., Dallas, Secy.

Texas Neuropsychiatric Association. Dr. David Wade, Austin, Pres.; Dr. James Blair, 1708 Nix Professional Bldg., San Antonio, Secy.

Texas Orthopedic Association, Dallas, May 5, 1952. Dr. G. W. N. Eggers, Galveston, Pres.; Dr. Margaret Watkins, 3629 Fairmount St., Dallas, Secy.

Texas Pediatric Society, Houston, Oct. 12-13, 1951. Dr. Thomas D. McCrummen, Austin, Pres.; Dr. M. C. Carlisle, 1410 Austin Ave., Waco, Secy.

Texas Public Health Association. Mr. Barnie A. Young, Austin, Pres.; Mr. Earle W. Sudderth, Dallas County Health Department, Court House, Dallas, Executive Secy.

Texas Radiological Society, Houston, Jan. 18-19, 1952. Curtis H. Burge, Houston, Pres.; Dr. R. P. O'Bannon, 650 Fifth Ave., Fort Worth, Secy.

Texas Railway and Traumatic Surgical Association. Dr. A. W. Hartman, San Antonio, Pres.; Dr. W. F. Parsons, First National Bank Bldg., Fort Worth, Secy.

Texas Rheumatism Association, Galveston, December, 1951. Dr. G. W. N. Eggers, Galveston, Pres.; Dr. Robert H. Mitchell, 210 Medical Arts Bldg., Fort Worth, Secy.

Texas Society for Mental Health. Dr. Warren T. Brown, Houston, Pres.; Mrs. Elizabeth F. Gardner, 2504 Jarratt Ave., Austin 21, Executive Secy.

Texas Society of Anesthesiologists, Dallas, May, 1952. Dr. L. F. Schuhmacher, Jr., Houston, Pres.; Dr. Werner Hoeflich, 2301 Reba, Houston, Secy.

Texas Society of Gastroenterologists and Proctologists, Dallas, May 5, 1952. Dr. Carl G. Giesecke, San Antonio, Pres.; Dr. John S. Bagwell, Medical Arts Bldg., Dallas, Secy.

Texas Society of Ophthalmology and Otolaryngology, Austin, Dec. 7-8, 1951. Dr. Edward D. Dumas, San Antonio, Pres.; Dr. Lyle Hooker, 627 Esperson Bldg., Houston, Secy.

Texas Society of Pathologists, Dallas, Jan. 27, 1952. Dr. Stuart A. Wallace, Houston, Pres.; Dr. A. O. Severance, 205 Camden, San Antonio, Secy.

Texas Surgical Society, Fort Worth, Oct. 1-2, 1951. Dr. Edward White, Dallas, Pres.; Dr. Truman G. Blocker, 927 Strand, Galveston, Secy.

Texas Tuberculosis Association, San Antonio, April 18-19, 1952. Dr. David McCullough, Kerrville, Pres.; Miss Pansy Nichols, 208 E. Ninth, Austin, Executive Secy.

Texas Urological Society, Dallas, 1952. Dr. William H. Heck, San Antonio, Pres.; Dr. J. D. Mitchell, 1414 Medical Arts Bldg., Dallas, Secy.

DISTRICT

Second District Society. Dr. A. H. Daniell, Brownfield, Pres.; Dr. C. B. Knox, Jr., Seagraves, Secy.

Third District Society, Plainview, April 8-9, 1952. Dr. Pauline Miller, Lubbock, Pres.; Dr. James T. Hall, 1302 Avenue Q, Lubbock, Secy.

Fourth District Society, Brady, November, 1951. Dr. S. Braswell Locker, Brownwood, Pres.; Dr. B. A. Hallum, Brady, Secy.

Fifth and Sixth Districts Society. Dr. E. King Gill, Corpus Christi, Pres.; Dr. Foy Moody, 1611 Fifth St., Corpus Christi, Secy.

Seventh District Society. Dr. George W. Tipton, Austin, Pres.; Dr. D. B. Faubion, 1403 C Guadalupe, Austin, Secy.

Eighth District Medical Society. Dr. Leonard Johnson, El Campo, Pres.; Dr. Robert Casey, Texas City, Secy.

Ninth District Society. Dr. F. Ray Black, Huntsville, Pres.; Dr. Lyman C. Blair, 1212 Rothwell, Houston, Secy.

Tenth District Medical Society. Dr. T. A. Fears, Beaumont, Pres.; Dr. J. M. White, Jr., 3149 Proctor, Port Arthur, Secy.

Eleventh District Society, Athens. Dr. Griff T. Ross, Mount Enterprise, Pres.; Dr. John M. Travis, Jr., Jacksonville, Secy.

Twelfth District Society, Waco, Jan. 8, 1952. Dr. S. C. Richardson, Bryan, Pres.; Dr. J. C. Terrell, Stephenville, Secy.

Thirteenth District Society. Dr. R. L. Daily, Wichita Falls, Pres.; Dr. S. W. Wilson, Medical Arts Bldg., Fort Worth, Secy.

Fourteenth District Society, Greenville, June, 1952. Dr. N. L. Barker, Paris, Pres.; Dr. L. W. Johnston, 502 W. College St., Terrell, Secy.

Fifteenth District Society, Marshall, Sept. 26-27, 1951. Dr. R. G. Granbery, Marshall, Pres.; Dr. H. O. Padgett, Marshall, Secy.

CLINICS

Dallas Southern Clinical Society, Dallas, March 17-20, 1952. Miss Betty Elmer, Medical Arts Bldg., Dallas 1, Executive Secy.

International Post-Graduate Medical Assembly of Southwest Texas, San Antonio, Jan. 22-24, 1952. Dr. John J. Hinchey, P. O. Box 2445, San Antonio, Secy.

New Orleans Graduate Medical Assembly. Dr. Woodard D. Beacham, Room 105, 1430 Tulane Ave., New Orleans 12, Secy.
North Texas-Southern Oklahoma Fall Clinical Conference, Wichita Falls, Sept. 19, 1951. Dr. W. L. Powers, Hamilton Bldg., Wichita Falls, Chairman.
Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 29-Nov. 1, 1951. Mrs. Muriel R. Waller, 512 Medical Arts Bldg., Oklahoma City 2, Executive Secy.
Post Graduate Medical Assembly of South Texas, Houston, 1952. Dr. C. A. Dwyer, Secy., 229 Medical Arts Bldg., Houston.

Tri-State Medical Assembly

The Tri-State Medical Assembly of Arkansas, Louisiana, and Texas will meet in Marshall, September 26 and 27. The program will include:

DR. ALAN G. CAZORT, Little Rock, "Therapy of Dyspnea in Asthma" and "Drug Sensitivity."
DR. WILLIAM LEVIN, Galveston, "Diagnosis and Treatment of Anemias" and "Hypersplenic Disorders."
DR. C. C. MORRIS, II, Galveston, "The Analysis of Behavior Problems in Children."
DR. FRED M. TAYLOR, Houston, "Undiagnosed Fevers."
DR. W. G. REDDICK, Dallas, "Management of Diabetic Coma."
DR. ELLIOTT MENDENHALL, Dallas, "Recent Advances in Treatment of Pulmonary Tuberculosis."
DR. EVERETT C. FOX, Dallas, "Treatment of Common Skin Diseases."
DR. F. A. DUNCAN ALEXANDER, McKinney, "Management of Pain."
DR. HARRY M. SPENCE, Dallas, "Hematuria."
DR. E. R. CREWS, San Antonio, "Potassium Depletion: Syndrome and Treatment."

A banquet will be held September 26 when the University of Texas Medical Branch will confer an award on Dr. George Perry Rains, Marshall, an early graduate of the University. Guest speaker will be E. J. Forio, Atlanta, Ga., vice-president of the Coca-Cola Company, who will speak on "Public Relations."

Entertainment has been planned for the wives during both days of the meeting.

North Texas-Southern Oklahoma Conference

A one-day clinical session has been planned for Wichita Falls on September 19 when the North Texas-Southern Oklahoma Fall Clinical Conference is held. In addition to the scientific papers, a luncheon, cocktail hour, and dinner have been arranged, and pharmaceutical companies will display their products. James E. Gheen, New York, will be the dinner speaker.

Women guests will have a program of their own, including a visit to an art gallery, antique displays, luncheon, and a style show. The ladies are invited to attend the evening activities with physicians.

The scientific program is as follows:

Clinical Aspects of Variations in Blood Volume—Dr. Champ Lyons, University of Alabama, Birmingham.
Eclampsia—Dr. Conrad G. Collins, Tulane University, New Orleans.
Management of Peptic Ulcer with Evaluation of Newer Secretory Drugs—Dr. Joseph B. Kirsner, University of Chicago, Chicago.
Management of Surgical Infections—Dr. Lyons.
Cervical Stump—Dr. Collins.
Current Concepts of Liver Disease—Dr Kirsner.

A registration fee of $8 per physician will include all meals and activities. Luncheon and dinner tickets will be available for women.

AMERICAN COLLEGE OF CHEST PHYSICIANS

Three Texans were elected to office during the seventeenth annual meeting of the American College of Chest Physicians held in Atlantic City from June 7 through June 10.

Dr. Alvis E. Greer, Houston, was elected first vice-president; Dr. Robert B. Morrison, Austin, governor for Texas; and Dr. Elliott Mendenhall, Dallas, regent for District 12.

SOUTHWESTERN SURGICAL CONGRESS

The third annual meeting of the Southwestern Surgical Congress will be held at Hotel Jefferson, St. Louis, September 24-26. A varied program by members of the congress will be highlighted by presentations from guests as follows:

Prevention and Control of Clostridial Infections in Wounds—Dr. W. A. Altemeier, Cincinnati.
Surgical Treatment of Peptic Ulcer—Dr. George Crile, Jr., Cleveland.
Surgical Management of Pancreatic Lesions—Dr. William P. Longmire, Los Angeles.
Surgical Lesions of Adrenal with Particular Reference to Cushing's Syndrome—Dr. James T. Priestly, Rochester, Minn.
Hyperparathyroidism—Dr. William F. Rienhoff, Jr., Baltimore.
Practical Potassium Therapy in Surgical Patients—Drs. Robert M. Zollinger, Edwin H. Ellison, Thomas W. Morgan, and Thomas Boles, Columbus, Ohio.

Among the members who will read papers are eight Texans: Drs. F. A. Duncan Alexander, McKinney; Billie L. Aronoff, Dallas; E. R. Crews, San Antonio; James W. Hendrick, San Antonio; Donald L. Paulson, Dallas; Edgar J. Poth, Galveston; James C. Walker, Temple; and Ben J. Wilson, Dallas.

Further information may be obtained from Dr. C. R. Rountree, Secretary, 1227 Classen, Oklahoma City, who reports that nonmembers will be requested to pay a $10 registration fee and that all physicians planning to attend the meeting should make their reservations directly with the hotel.

Postgraduate Short Courses in Dallas

Postgraduate conferences to be sponsored in coming months by the Dallas Southern Clinical Society have been announced as follows:

Cardiology, September 10-13, Dr. Franklin D. Johnston, professor of Internal Medicine, University of Michigan, Ann Arbor.

Surgery, October 8-10, Dr. Champ Lyons, Professor of Surgery, University of Alabama, Birmingham.

Diagnosis and Therapy, December 10-12, Dr. S. Howard Armstrong, Jr., Professor of Medicine, University of Illinois, Chicago.

Obstetrics and Gynecology, January 7-9, guest speaker to be announced.

Further details about these courses, all to be held in Dallas, may be obtained from the office of the society, 433 Medical Arts Building, Dallas 1. Information also is available from that source about the Spring Clinical Conference to be held March 17-20.

Texas Pediatric Society

The annual session of the Texas Pediatric Society will be held in Houston on October 12 and 13. The speakers and program for the meeting are as follows:

DR. GLADYS FASHENA, Southwestern Medical School, Dallas: "Experiences with ACTH in Treatment of Rheumatic Fever."
DR. SIDNEY S. GELLIS, Children's Hospital, Boston: "Infants of Diabetic Mothers" and "Viral Hepatitis."
DR. THEO PANOS, Children's Hospital, Galveston: "Significance of Stress in Relation to Pediatric Practice."
DR. MARGARET H. D. SMITH, Tulane University, New Orleans: "Treatment of Miliary Tuberculosis and Tuberculous Meningitis" and "Salmonella Infections in Infants and Children."
DR. FRED M. TAYLOR, Baylor University College of Medicine, Houston: "Undiagnosed Fevers."
DR. LAWSON WILKINS, Johns Hopkins University School of Medicine, Baltimore; "Endocrine, Genetic and Other Factors Influencing Somatic Growth and Development," "The Diagnosis and Treatment of Hyperadrenocorticism," and "Constitutional and Endocrine Variations of Sexual Development."

Information can be obtained from Dr. M. C. Carlisle, Secretary, 1410 Austin Avenue, Waco.

SOUTHWEST REGIONAL CANCER CONFERENCE

The annual Southwest Regional Cancer Conference will be held September 13 in Fort Worth. The program and speakers will be as follows:

DR. HARRY E. BACON, professor of proctology at Temple University School of Medicine, Philadelphia: "Method of Examining the Distal Bowel: The Importance of Premalignant Lesions" and "Is It Possible to Improve the End Results by Extended Surgery for Patients with Rectal Cancer?"

DR. HOWARD R. BIERMAN, associate clinical professor of experimental oncology at the University of California Medical School, San Francisco: "Intra-arterial Catheterization in Man" and "Recent Studies on Leukemia in Man."

DR. WILLIAM E. COSTOLOW, clinical professor of medicine at the University of Southern California School of Medicine, Los Angeles, will speak on topics to be announced later.

DR. CARL T. JAVERT, assistant professor of obstetrics and gynecology at Cornell University Medical College, New York: "Observations of the Pathology and Spread of Endometriosis Based on Theory of Benign Metastasis" and "Observations of the Pathology and Spread of Endometrial Carcinoma with Special Reference to Lymph Node Metastasis."

The conference will begin at 9:30 a.m., a luncheon with questions and answers will be held, and an evening meeting for the public is planned. The guest speakers also will participate in a tumor clinic teaching conference at 8 p.m. September 12.

No registration fee will be charged.

Further information may be obtained from the Secretary, 209 Medical Arts Building, Fort Worth.

International and National Meetings

An international congress sponsored by the International Association of Gerontological Societies, Gerontological Society, Inc., and the American Geriatrics Society will be held in St. Louis, September 9 through September 13. The program is divided into four sections: biology and medicine; sociology, psychology, education, and religion; economics and welfare; and medical service, hygiene and housing. The conference is open to all interested persons. A registration fee of $10 will be charged. Further information may be obtained from Dr. E. V. Cowdry, 660 South Kingshighway, St. Louis, Mo.

The Mississippi Valley Medical Society's sixteenth annual meeting will be held in Peoria, Ill., September 19 until 21. No registration fee is charged and every ethical physician is invited. Clinical teachers from medical schools will conduct the assembly program, which is designed particularly to appeal to general practitioners. Programs may be obtained from Dr. Harold Swanberg, Secretary, 209-224 W. C. U. Building, Quincy, Ill.

American Medical Writers' Association will meet in Peoria, Ill., September 19, during the Mississippi Valley Medical Society meeting. No registration fee will be charged. Ethical physicians and college graduates interested in medical writing or journalism are invited. Additional information may be obtained from Dr. Harold Swanberg, 209-224 W. C. U. Building, Quincy, Ill.

PERSONALS

Dr. G. E. Brereton, Dallas, and *Dr. R. D. Holt, Jr.,* Meridian, recently were named to the newly created Board of Vocational Nurse Examiners by Governor Allan Shivers, the Dallas *Morning News* reports.

Dr. Gordon F. Madding, San Angelo, recently delivered a lecture on surgery to military doctors at Walter Reed General Hospital, Washington, D. C., at the invitation of the Surgeon General, reports the Val Verde *County Herald.*

Dr. P. M. Ramey and *Dr. John F. McKeeney, Jr.,* Temple, presented a paper, "Parathyroid Deficiency Following Thyroid Surgery," at the annual meeting of the American Goiter Association in Columbus, Ohio, informs the Temple *Telegram.* The paper was written with *Dr. A. C. Scott, Jr.,* Temple, as part of a symposium on surgical aspects of goiter.

Dr. Michael K. O'Heeron, Houston, is speaking on "Postgraduate Training in the Small Hospital" before the National Medical Association in Philadelphia, August 20-24, reports *The Journal of the American Medical Association.*

Dr. Ben G. Yeager, formerly of the Veterans Administration Center in West Los Angeles, has been appointed superintendent of the Wichita Falls State Hospital, reports the Wichita Falls *Daily Times.*

Dr. Hayden Hackney Donahue, Little Rock, Ark., was named assistant medical director and tuberculosis coordinator of the State Board for Hospitals and Special Schools, states the Fort Worth *Star-Telegram.*

Dr. Stanley W. Bohmfalk, Weslaco, was installed recently as president of Rotary Club, the Weslaco *News* states.

Recent births have been announced by *Dr. and Mrs. R. C. Stiernberg,* Galveston, a son; *Dr. and Mrs. York Lancaster,* Houston, twin boys; and *Dr. and Mrs. R. A. Stevenson, Jr.,* Galveston, a daughter, announces the *Alumni Bulletin* of the University of Texas Medical Branch. *Dr. and Mrs. George E. Strickland,* Florence, also have announced the birth of a daughter.

Dr. C. E. Buswell, member of the staff of the Veterans Administration Hospital at Legion, died June 18 of carcinoma of the prostate. Stationed formerly in Port Arthur, San Antonio, and Waco, Dr. Buswell is survived by his wife; a daughter, Katherine; his mother, Mrs. J. O. Buswell, Sr., New York; and two brothers.

TEXAS ACADEMY OF GENERAL PRACTICE

Approximately fifteen speakers will take part in the program to be offered at the second annual scientific assembly of the Texas Academy of General Practice in Houston September 10 and 11.

The scientific program is as follows:

SEPTEMBER 10

Use of Various Insulin Preparations in General Practice—Dr. Franklin Bruce Peck, Indianapolis.
Surgical Infections—Dr. Carl A. Moyer, Dallas.
Psychiatry in General Practice—Dr. Karl A. Menninger, Topeka, Kan.
Hand Infections—Dr. Philip Thorek, Chicago.
Maternal Mortality and Its Prevention—Dr. Andrew A. Marchetti, Washington, D. C.
Back Pain from the General Practitioner's Viewpoint—Dr. Edward F. Hartung, New York.
Treatment of Burns—Dr. Truman G. Blocker, Jr., Galveston.
Use of Diuretics in Congestive Heart Failure—Dr. George E. Burch, New Orleans.

SEPTEMBER 11

Commissurotomy for Mitral Stenosis—Dr. Clive R. Johnson, Fort Worth.
Role of Cortisone and ACTH in Management of Rheumatic Disorders—Dr. Hartung.
Psychiatry in General Practice—Dr. Menninger.
Intestinal Obstruction—Dr. Thorek.
Office Diagnosis and Management of Lesions of Cervix, Vulva, and Vagina—Dr. Marchetti.
A Simplified Technique for Intestinal Anastomosis—Dr. J. Peyton Barnes, Houston.
Management of Acute Myocardial Infarction—Dr. Burch.
Gallbladder Disease—Dr. James A. Greene, Houston.
Diagnosis and Treatment of Common Types of Contact Dermatitis—Dr. Everett R. Seale, Houston.

Senator Kenneth S. Wherry, Nebraska, or Senator Everett Dirksen, Illinois, will be the banquet speaker September 10 and Mr. Mac F. Cahal, Kansas City, executive secretary of the American Academy of General Practice, will speak at a luncheon September 10. The opening address will be delivered by Dr. J. P. Sanders, Shreveport, president of the American Academy of General Practice.

University of Texas Medical Branch

The Department of Radiology of the University of Texas Medical Branch has developed a guest lecturers organization to promote interest in the general field of radiology and to support high standards for radiologic work in the Southwest. Dr. Walter J. Stork, Houston, is chairman; Dr. Carrol F. Crain, Alice, vice-chairman; and Dr. Joe C. Rude, Galveston, temporary secretary. The organization, which includes thirty-seven radiologists from Texas, Oklahoma, and Louisiana, will meet October 28 and 29.

Walter J. Meek, Ph.D., emeritus professor of physiology and associate dean of the University of Wisconsin School of Medicine, has accepted a position as lecturer in physiology at the Medical Branch.

C. D. Leake, Ph.D., vice-president of the Medical Branch, gave the Clendening lectures at Kansas University Medical School in April.

A grant of $18,000 for a fellowship in the Division of Plastic Surgery to study methods of treating burns has been given to the Medical Branch by the T. J. Brown and C. A. Lupton Foundation. The study to compare the exposure and pressure methods of treating burns will be under the direction of Dr. T. G. Blocker, Jr.

An increase in the teaching staff at the Medical Branch to provide instruction for the increasing number of clinical students has been made by the following appointments: Dr. M. Allen Forbes, assistant professor of syphilology; Dr. Milton Hejtmancik and Dr. Harry Levine, assistant professors of internal medicine; Dr. Irving M. Cohen, assistant professor of neurology and psychiatry; Dr. Robert L. Hargrave, assistant professor of oncology and cancer coordinator; Dr. John H. Childers, assistant professor of surgical pathology; Dr. Roger Lienke, assistant professor of pediatrics; and Dr. Caroline Rowe, assistant professor of radiology.

Dr. Etta Mae MacDonald, assistant professor of bacteriology and parasitology, will spend the coming year as an exchange professor at the Institute of Microbiology of the University of Helsinki, Finland, under the auspices of the Department of State.

Recent lecturers at the Medical Branch were Dr. Robert J. Boucek, fellow of the Mayo Foundation, Rochester, and Dr. Frank R. Winton, professor of pharmacology, University College, London.

Cancer Program Offered

A second series of professional training sessions on cancer is being arranged by the Texas Division of the American Cancer Society, Dr. G. V. Brindley, chairman of the Texas Division's executive committee, has announced.

The series will begin in August and continue throughout the fall, meeting in each Texas district. Dates which have been set are as follows: District 13 at Fort Worth, September 12; District 6 at Alice, September 25; District 15 at Atlanta, October 9; District 11 at Jacksonville, October 10; and District 5 at San Antonio, November 1. Sessions in other districts are being arranged with district councilors.

Endorsed by the Commission on Education of the American Academy of General Practice, the training sessions may be counted as part of the postgraduate education required every three years to maintain membership in the Academy.

LIBRARY SECTION

PACKAGE SERVICE

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Request for packages should be addressed "Library, Texas Medical Association, 700 Guadalupe Street, Austin, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Packages are allowed to remain in the hands of the borrower for 14 days.

ACCESSIONS

The following additions were made to the Library during July:

Reprints received, 1,522.

Journals received, 302.

Books received, 9.

Practical Clinical Psychiatry, Strecker and others, Blakiston Company, Philadelphia.

From a Doctor's Heart, Snyder, Philosophical Library, New York.

Endoscopy, as Related to Diseases of the Bronchus, Esophagus, Stomach and Peritoneal Cavity, Benedict; *Pharmacologic Principles of Medical Practice,* 2nd edition, Kontz and Carr, Williams and Wilkins, Baltimore.

Low Sodium Diet, Rice, Lea and Febiger, Philadelphia.

Clinical Pediatric Urology, Campbell, W. B. Saunders Company, Philadelphia.

Metabolic Methods, Clinical Procedure in the Study of Metabolic Function, Consolazio, Johnson, and Marek, C. V. Mosby Company, St. Louis.

Review of Physiological Chemistry, Harper, University Medical Publishers, Palo Alto, Calif.

Odyssey of Modern Drug Research, Burlingham, Upjohn Company, Kalamazoo, Mich.

SUMMARY OF SERVICE

Local users, 29.	Borrowers by mail, 31.
Local packages, 33.	Packages mailed, 41.
Items borrowed, 324.	Film borrowers, 57.
	Films loaned, 51.

MOTION PICTURE FILM LIBRARY

Motion picture films on medical subjects, 16 mm., both silent and sound, some in color, and suitable for either medical or lay audiences, are available for loan to county medical societies, hospital staffs, or individual physicians, on request. Borrowers will be requested to pay only the cost of shipment of the films, by express, with insurance, and for any damage to films in the hands of the borrower.

Request for films should be addressed to "Motion Picture Film Library, Texas Medical Association, 700 Guadalupe Street, Austin, Texas." A list of available films with descriptions, will be furnished on request.

The following motion pictures were loaned by the Library during the month of July:

A.M.A. Newsreel (American Medical Association)—Dr. L. C. Biggers, Bonham.

Analgesia, Continuous Caudal (Becton, Dickinson and

Company)—University of Texas Graduate School of Social Work, Austin.

Anemia, Erythroblastic (Mead Johnson)—Memorial Hospital, Sulphur Springs.

Anesthesia, Novocain, in Obstetrics (Winthrop Chemical Corporation)—Dilley Clinic Hospital, Dilley.

Anesthesia, Regional (Winthrop Chemical Corporation)—Memorial Hospital, Sulphur Springs.

Anesthesia with Vinethene (Merck and Company)—Tahoka Hospital, Tahoka.

Anoxia, The Physiology of (Linde Air Products)—Dr. John T. Lowry, Laredo.

Appendicitis in Childhood (Mead Johnson)—Goodnight Hospital and Clinic, Lubbock, and Scott and White Memorial Hospitals, Temple.

Appraisal of the Newborn (Mead Johnson)—St. Vincent Hospital Medical Staff, Sherman.

As Others See Us (American Hospital Association)—Dr. William M. McClellan, Donna.

Ascorbic Acid and Scurvy (Mead Johnson)—Dr. C. G. Goddard, Bastrop.

Aureomycin, The Versatile Antibiotic (Lederle Laboratories)—Dr. N. L. Schiller, Austin.

Breast Cancer: The Problem of Early Diagnosis (American Cancer Society)—Tahoka Hospital, Tahoka.

Breast Self-Examination (American Cancer Society)—St. Vincent Hospital Medical Staff and Nurses, Sherman, and Dr. N. L. Schiller, Austin.

Breech Extraction with Forceps (Mead Johnson)—Dilley Clinic Hospital, Dilley.

Cardiovascular Anomalies, Congenital, Amenable to Surgery (Mead Johnson)—U. S. Army Hospital Staff, Fort Hood.

Cervical Smear (Dr. Karl J. Karnaky)—Goodnight Hospital and Clinic, Lubbock.

Cesarean Section, A Low Cervical (Mead Johnson)—Dr. John T. Lowry, Laredo.

Chest Disease, Surgery In (British Information Services)—Dr. C. G. Goddard, Bastrop.

Cholecystectomy (Mead Johnson)—Scott and White Memorial Hospitals, Temple.

Coarctation of the Aorta, Surgical Treatment for (Dr. Philip Thorek)—Dr. C. G. Goddard, Bastrop.

Coming Home (Texas Tuberculosis Association)—Rotary Club, Bonham, and Lions Club, Bonham.

Diphtheria and Croup (Lederle Laboratories)—Newton County Memorial Hospital, Newton.

Doctor Speaks His Mind (American Cancer Society)—Dr. L. C. Biggers, Bonham.

Edema—Cardiac and Renal (Winthrop Chemical Corporation)—Memorial Hospital, Sulphur Springs.

Esophagogastrostomy, Supra-Aortic, for Carcinoma of the Midportion of the Esophagus (Dr. Philip Thorek)—Dr. John T. Lowry, Laredo.

Esophagus, Surgical Treatment for Carcinoma of the Lower End of (Dr. Philip Thorek)—Scott and White Memorial Hospitals, Temple.

Eyes for Tomorrow (Hurst Eye, Ear, and Throat Clinic)—Dr. L. C. Biggers, Bonham.

Folvite in the Treatment of the Anemias (Lederle Laboratories)—Dr. C. G. Goddard, Bastrop.

Gastrectomy, Safer (Billy Burke Productions)—Dr. John T. Lowry, Laredo, and Scott and White Memorial Hospitals, Temple.

Heart Disease, Oxygen Therapy in (Linde Air Products)—Hopkins County Memorial Hospital, Sulphur Springs.

Hemicolectomy for Carcinoma of the Right Side of the Colon (Dr. Philip Thorek)—Scott and White Memorial Hospitals, Temple.

Human Fertility, Studies in (Ortho Products)—Scott and White Memorial Hospitals School of Nursing, Temple.

Hypodermic Syringes and Needles: Their Care and Function (Becton, Dickinson and Company)—Littlefield Hospital and Clinic, Littlefield.

Hysterectomy (Mead Johnson)—Scott and White Memorial Hospitals School of Nursing, Temple, and Littlefield Hospital and Clinic, Littlefield.

In Daily Battle (National Foundation for Infantile Paralysis)—Rotary Club, Overton.

Management of the Failing Heart (Varick Pharmacal Company)—Hopkins County Memorial Hospital, Sulphur Springs.

Normal Delivery (Mead Johnson)—University of Texas Graduate School of Social Work, Austin.

Portacaval Shunt for Portal Hypertension (Dr. Philip Thorek)—Dr. John T. Lowry, Laredo.

Psychiatry in Action (British Information Services)—Dr. William W. McClellan, Donna.

Roentgen Pelvimetry (Mead Johnson)—Medical and Surgical Clinic, Laredo.

Strabismus Surgery (Dr. Ray K. Daily)—Dr. John T. Lowry, Laredo.

Techniques of Injection (Becton, Dickinson and Company)—Littlefield Hospital and Clinic, Littlefield, and Cuero Hospital and Clinic, Cuero.

They Also Serve (American Medical Association)—Radiological School, Texas State Department of Health, Austin.

Traitor Within (American Cancer Society)—Rotary Club, Bonham.

Transthoracic Esophageal Diverticulectomy (Dr. Philip Thorek)—Scott and White Memorial Hospitals School of Nursing, Temple.

Trichomonas Vaginalis and Leukorrhea (Dr. Karl J. Karnaky)—Scott and White Memorial Hospitals School of Nursing, Temple.

Urologic Conditions, Diagnosis of (Winthrop Chemical Corporation)—Cuero Hospital and Clinic, Cuero.

Varicose Veins and Their Complications (Becton, Dickinson and Company)—Scott and White Memorial Hospitals School of Nursing, Temple.

Varicose Veins, Treatment of (G. D. Searle and Company)—Hopkins County Memorial Hospital, Sulphur Springs.

X-Ray, Chest, Routine Admission in General Hospitals (Texas Tuberculosis Association)—Medical and Surgical Clinic, Laredo.

BOOK NOTICES

[1]Newer Concepts of Inflammation

Valy Menkin, M. A., M. D., Associate Professor of Experimental Pathology, Head of Experimental Pathology, Agnes Barr Chase Foundation for Cancer Research, Temple University School of Medicine. First edition. Cloth, 145 pages. $3.50. Springfield, Ill., Charles C. Thomas, 1950.

This monograph, consisting of 145 pages, covers in technical detail the status of most recent actual and theoretic

[1]*A. O. McCary, M. D., Freeport.*

processes of inflammation. The intriguing inflammatory elements of exudate, leukotaxine, leukocytosis-promoting factors, necrosin, pyrexin, leukopenic factors, glucose, and possible growth-promoting factor or factors are discussed in minute detail as to their origin, function, and isolation.

Dr. Menkin describes not only the theoretic isolation and action of these substances in inflammation, but also the method of isolating them. He summarizes the process of inflammation under five headings. First, there is an increased capillary permeability after liberation of leukotaxine, followed by lymphatic blockade by occluding thrombi and fibrinous network. The next step is a migration of leukocytes, in turn referable to the liberation of leukotaxine, which is affected by the local hydrogen ion concentration of the area referable to a disturbance of carbohydrate metabolism. At this stage glucose is formed in the injured cells by protein deamination. This particular phase of inflammation possibly explains the necessity for an increase in insulin dosage in the diabetic patient with acute inflammation. Later in the process, the leukocytosis-promoting component enters into the inflammatory reaction. Necrosin then enters the picture with its proteolytic activity followed by the liberation of pyrexin, which induces fever. When leukopenia is present, it is probably causing the liberation in the exudates of a thermostable leukopenic factor and a thermolabile factor termed leukopenin. The next step in inflammation is repair, which is possibly referable to the liberation of one or several growth-promoting factors in exudates.

Not much time is required to read this book. It is written simply, with excellent bibliography and will bring its reader up to the moment on the fact and theory of inflammation.

[2]Functional Anatomy of the Limbs and Back

W. Henry Hollinshead, A. B., M. S., Ph. D., Head of the Section on Anatomy, Mayo Clinic, Rochester; Professor of Anatomy, Mayo Foundation, University of Minnesota. Cloth. 326 pages. $6. Philadelphia, W. B. Saunders, 1951.

This recent publication, well bound, on good paper, and in readable type, provides under one cover the pertinent anatomy of the human body, which is well presented not only by simple nontechnical reading but by illustrations.

The book is indicated for physiotherapy students and physiotherapy departments, interns, and medical students. It should be readily available to anyone interested in rehabilitation for reference to basic locomotion.

The first section on the organization of the body tissues as a whole is simply written and easily read. Section 2 covers completely the upper extremities; the motor illustrations are extremely good. Section 3 deals with the back alone. Section 4 covers completely the lower extremities, and section 5 the head, neck, and trunk.

The author must be commended for the simplicity with which this work is organized and the brevity and the clearness with which it is illustrated.

The reviewer would suggest for a future edition inclusion of cutaneous nerve supply, with particular reference to referred pain, especially the following clinical entities: (1) scalenus anticus syndrome, (2) cervical and lumbar disk syndrome, (3) shoulder-hand syndrome, (4) scapulocostal syndrome, (5) pyriformis muscle spasm with sciatic nerve pain, and (6) herniated fat pad with ilioinguinal nerve pain.

[2]*Paul R. Harrington, M. D., Houston.*

[3]Textbook of Medicine

Russell L. Cecil, M. D., Sc. D.; and Robert F. Loeb, Bard Professor of Medicine, Columbia University, New York. Eighth edition. Cloth. 1,551 pages. $12. Philadelphia, W. B. Saunders Company, 1951.

Since the first edition of his book in 1927, Dr. Cecil always has been especially happy in securing distinguished medical leaders to prepare articles for his widely used and valued "Practice of Medicine." He has been equally happy in getting a co-editor, Dr. Loeb, and three associate editors, Drs. Alexander B. Gutman, Walsh McDermott, and Harold G. Wolff, to make the subject matter of this eighth edition accord with values which have changed in the past decade.

The shift in what is of importance to the present day doctor may be seen in the case of typhoid fever. Once the primary topic of prolonged discussion, the subject is now given but a few pages, since typhoid fever is a disappearing disease readily cured by Chloromycetin. Doctors are prone to be interested in the diseases that baffled them, so that now in the forefront of discussion are the viral diseases, against most of which new antibiotic agents are ineffectual.

A great deal of space is given to problems concerning degenerative disorders, collagen disorders, and the deteriorations in the circulatory system. Regarding the last-named group, it may be noted that the authors have swung away from the Starling theory of congestive heart failure and taken new standpoints as to the pathogenesis of this age-old problem, which once was believed to be solved so fully and which again has become involved in difficulties.

A small revision in the text of Stanley Cobb's introduction to psychosomatic disorders is the added sentence, "To distinguish between 'functional' and 'organic' is silly." It probably is silly, but it is doubtful whether Dr. Cobb, with whatever vigor and acerbity he sharpens his blade, will ever make this conception acceptable to the present generation of doctors. In 1937 John Dewey addressed members of the American College of Physicians, courteously trying to make them see the meaning of his topic, "The Unity of Man." Since then the address has been accepted as a classic, but the College members thought so little of it that they declined to publish it in the *Annals of Internal Medicine*. Cobb, who is an excellent stylist and better versed in medical lingo than Dewey, has tried for years to get across to medical personnel the idea expressed in the sentence quoted. It is to be hoped that in some distant century it may be put across, but for now, most stalwarts will reserve the right to logic-tight compartments in their thinking.

[4]Steroid Hormones and Tumors

Alexander Lipschutz, M. D. Cloth. 283 pages. $6. Baltimore, Williams and Wilkins Company, 1950.

A report of fifteen years' research in the production and inhibition of tumoral growth by steroids, this monograph is by one of the world's outstanding experimental endocrinologists. The author concisely carries the thought pattern through from beginning to end. The book will enhance the libraries of physiologists, biologists, endocrinologists, oncologists, and students of research technique. It is not intended for the average clinician, although it is very readable.

Summaries of experimental findings and their interpretation to clinical medicine are well spaced. The author shows the ability to report and interpret his data and yet not claim undue parallelism between his experimental

[3]*W. R. Houston, M.D., Austin.*
[4]*Charles C. Henderson, M.D., Mayo Clinic, Rochester, Minn.*

animals and man. Of prime importance to oncologists is the extensive bibliography covering this field in the world's literature, to which ready reference may be made. Many charts, tables, photographs, and photomicrographs clearly illustrate the text.

The tumorigenic action of steroids experimentally, with its implication for the problem of cancer, is discussed. The author develops the experimental basis for the antitumorigenic action of steroids and defends the concept of the mosaic of territories in cancerigenesis. The third part deals with the steroid balance or steroid homeostasis in the animal with the postulation of an antitumoral autodefense theory.

A brief concluding chapter to clinicians gives the possible interpretation of the experimental data. Dr. Lipschutz observed that all estrogens, natural or artificial, could become tumorigenic and toxic for the body; however, this fact should not prevent their clinical use. The administration of estrogens should be timed to imitate the sexual cycle to guarantee discontinuous action of the estrogens, and the pellet implantation of estrogen possibly should be avoided. The administration of estrogens by mouth for two weeks, off for two weeks, on for two weeks, and so on, will insure their harmlessness in most instances. Exceptions might be in treating prostatic carcinoma in men and breast carcinoma in aged women.

Conversely, in the antitumorigenic action of steroids, subcutaneously implanted pellets of testosterone would appear superior to intermittent injections of testosterone in the treatment of advanced mammary cancer.

[5]A Text-Book of X-Ray Diagnosis

Edited by S. Cochrane Shanks, M. D., F. R. C. P., F. F. R., Director, X-Ray Diagnostic Department, University College Hospital, London; and Peter Kerley, M. D., F. R. C. P., F. F. R., D. M. R. E., Director X-Ray Department, Westminster Hospital; Radiologist, Royal Chest Hospital, London. Second edition, vol. 2. Cloth, 689 pages. $15. Philadelphia, W. B. Saunders Company, 1951.

One of a series of four volumes, this book is the second edition relating to the cardiovascular and respiratory systems. The radiograms, although excellent, are negatives, detracting considerable value from the illustrations. A wealth of material from a rich source of personal experience is presented, but the inexperienced observer will miss many of the finer details. He will have to transpose mentally the radiograms or consider them as being observed through the fluoroscope.

Occasional errors in editing are minor; the general quality of the book is good throughout. The nomenclature for the lung segments differs from that prevalently used in this country. The English are great anatomists and this trait is revealed particularly in the section on the respiratory system. The book will prove interesting to the radiologist, cardiologist, and bronchoscopist.

[6]Management of Obstetric Difficulties

Paul Titus, M. D., Obstetrician and Gynecologist to the St. Margaret Memorial Hospital, Pittsburgh; Consulting Obstetrician and Gynecologist to the Shadyside Hospital, Pittsburgh; Secretary of the American Board of Obstetrics and Gynecology; Member Reserve Consultants Advisory Board, Bureau of Medicine and Surgery, United States Navy (Captain, MC, USNR). Fourth edition. Cloth, 1,046 pages. $14. St. Louis, C. V. Mosby Company, 1950.

The rapid advances in obstetrics within recent years with the attendant lowering of the infant and maternal death rate has made mandatory this new edition. Though this is basically a discussion of abnormal obstetrics, the author has wisely chosen his material so that the basic principles of good obstetrics are not neglected. The presentation is made in such a manner that one must consider the normal in order to appreciate the abnormal.

The two chapters on sterility are excellent, both in presentation and in the application of practical therapeutics. The section on diagnosis of pregnancy is somewhat basic and of the type often covered in the average textbook of obstetrics.

The actual management of the complicated or difficult case is thoroughly handled in all of its ramifications, never without sight of the fact that normal obstetrics should be understood before the abnormal is considered.

Many of the illustrations of these procedures are of the standard type seen in many textbooks, but some are above the average and worthy of mention.

I was glad to see that an entire section was given to a discussion of the newborn infant with particular attention to accidents, birth injuries, and asphyxia of the newborn. The average obstetrician will have to handle this latter complication and the subject is presented in a practical manner.

This book is well-rounded with an excellent discussion of obstetric analgesia and anesthesia giving particular attention to the newer methods such as saddle block. Throughout the book, practical instructions are given with simplified procedures that are often life-saving measures.

I feel that this book is valuable and should be a part of the library of any physician doing obstetrics. The organization is such that the book would serve as a quick and ready reference without the necessity of wading through a maze of outmoded and alternate procedures.

[7]Delayed Union in Fractures of the Long Bone

Kenneth W. Starr, M. B., M. S. (Melb.), F. R. C. S., (Eng.), F. A. C. S., F. R. A. C. S.; Surgeon, Sydney Hospital, New South Wales; Consulting Plastic Surgeon, Faculty of Dentistry, University of Sydney; Member of the Court of Examiners, Royal Australasian College of Surgeons. Cloth, 200 pages. $9. St. Louis, C. V. Mosby Company, 1947.

This book, winner of the Jacksonian Prize Essay awarded in 1944 by the Council of the Royal College of Surgeons of England, was written in 1944 when the author was conducting a busy surgical division in a large military hospital in England. It reveals a tremendous amount of work; written in painstaking detail, each of its three parts contains excellent data from the clinical source from which the author had to draw.

Part 1, entitled "The Morphogenesis of Bone," gives in great histologic detail the structure and chemistry of bone and the cycle of bone reconstruction, together with the relationship between structure and function in bone pathology.

In part 2, "The Healing of Fractures," consideration is given to the anatomic structures involved in repair; repair after fractures, including the chemistry of the fracture site; the condition of the bone ends; and the reorganization of callus, together with the rate of healing and the healing of infected fractures.

Part 3 is devoted to the etiology and statistics of delayed union, therapeutic methods, clinical approach, treatment of closed fractures, and management of open fractures, septic fractures, and skin problems.

The reviewer believes that the author has compiled an excellent and brief review which any clinician should read periodically.

[5]*Ben DuBilier, M.D., Austin.*
[6]*Andrew S. Tomb, M. D., Victoria.*
[7]*F. O. McGehee, M.D., Houston.*

[8]Regional Orthopedic Surgery

Paul C. Colonna, M. D., Professor of Orthopedic Surgery, University of Pennsylvania Medical School. Cloth, 706 pages. $11.50. Philadelphia, W. B. Saunders Company, 1950.

Colonna's "Regional Orthopedic Surgery" in one volume covers as well as any book written to date a scope of orthopedic surgery and fractures. It is written in terminology which is easily understood and interesting. The book is excellent not only as a text for students, interns and residents, but also for those interested in the skeletal system and its deformities. Each condition and treatment is covered in detail.

The illustrations have been chosen to obtain the most good from a minimum of reading. Since the book covers the field of deformities and traumatic injuries of the skeletal system so well, every general practitioner should have a copy as a reference to help him decide whether to treat the patient or refer him to a specialist.

I have been so impressed with this book that I am placing one in my own library.

[9]Medical Treatment

Geoffrey Evans, M. D., F. R. C. P., Consulting Physician, St. Bartholomew's Hospital. First edition. Cloth, 1,398 pages. $20. St. Louis, C. V. Mosby Company, 1951.

This text on treatment is a compilation by a rather limited number of the British medical profession, chiefly fellows of the colleges. Just off the press, the book is as up-to-date as any book can be, when it is considered that the whole field of pharmacology is advancing with rapidly accelerated speed. Inclusion of some of the newer antibiotic drugs indicates how thoroughly up-to-date the work is.

The subject matter is arranged alphabetically, but an excellent index is included. The style is as clear and succinct throughout as it is to be expected from the British writers. Such a book should prove a useful reference.

[10]Food Allergy

Herbert J. Rinkel, M. D., F.A.C.P., F.A.C.A., F.A.A.A.; Theron G. Randolph, M. D., F.A.C.A., F.A.A.A., A.A.C.P., Instructor in Medicine, Northwestern University Medical School; and Michael Zeller, M. D., F.A.C.P., F.A.C.A., F.A.A.A., Clinical Instructor in Medicine, University of Illinois College of Medicine. Cloth, 492 pages. $8.50. Springfield, Ill., Charles C. Thomas, 1951.

Times and medicine change. In Osler's day "if you would know medicine—know syphilis" has changed to "—know allergy." The field of allergy is so broad and its ramifications so far-flung that unless a good allergic background is brought to each diagnostic problem the patient is likely to suffer and certainly has not had the proper evaluation.

The many cases of "vertigo" and "tiredness" for which thousands of ears have been "blown out" and countless millions of vitamin pills have been prescribed often are of allergic origin. Therefore, a thorough and complete knowledge of the many allergies seems essential. Allergy, which may be called a disease of our specialized civilization, is on the increase and it is not due to the recognition factor either!

The purpose of the monograph is "to describe food allergy and to clarify its recognition and management." It fulfills its mission fully and completely in seventeen chapters with an appendix and index. Food allergy is defined as a term used in reference to those foods for which it is possible to demonstrate a cause and effect relationship between the ingestion of a specific food and the production or accentuation of allergic symptoms. It is divided into cyclic and fixed food sensitization; the former is subdivided into three phases with three subheads under each.

The pitfalls of surgery in allergic cases are discussed. Etiology is considered under predisposing factors (hereditary, age, sex, climate, and so forth) and specific factors (use, incidence, combinations of food, and so forth). Symptomatology is presented under two headings of general characteristics and specific local reactions. The specific diagnosis is divided into five parts comprising history, diagnostic techniques, clinical procedures, trial diets, and use of diaries. Treatment consists of prophylaxis and specific measures which include a large number of diets and recipes.

The text is well presented and covers a large number of cases with the combined efforts, thoughts, and observations of all three authors correlated in handy readable form. Forty-four pages are devoted to 7 case reports and 96 pages to the National Food, Drug, and Cosmetic Act. The book is interesting, easy to read, and well presented.

[11]Chronic Ulcerative Colitis (Thrombo-Ulcerative Colitis)

J. Arnold Bargen, M. D., Division of Medicine, Mayo Clinic, Rochester, Minn. Lexide, 59 pages. $2. Springfield, Ill., Charles C. Thomas, 1951.

This monograph deals with the form of chronic ulcerative colitis sometimes spoken of as thrombo-ulcerative. In this type the diplostreptococcus is the causative organism.

The pathologic changes are discussed thoroughly. The course of the disease and methods of determining which forms of ulcerative colitis belong to the thrombo-ulcerative group are pointed out by Dr. Bargen. He describes the many complications which he has observed in his extensive experience with the disease. Medical treatment, including new types of treatment, and the surgical indications and management of the disease are considered.

[12]The Physiological Basis for Oxygen Therapy

Julius H. Comroe, Jr., Professor of Physiology and Pharmacology, Graduate School of Medicine, University of Pennsylvania, and Clinical Physiologist, Hospital of the University of Pennsylvania; and Robert D. Dripps, Professor of Anesthesiology, University of Pennsylvania School of Medicine, and Director of Anesthesiology, Hospital of the University of Pennsylvania. First edition. Lexide. 75 pages. $2. Springfield, Ill., Charles C. Thomas, 1950.

This book, essentially without illustrations, is written primarily for the physiologist, but it also presents the physiologic aspects of the subject in suitable form for clinicians and for instruction in clinical subjects. The printing is excellent.

The material is divided into four general parts. In the first part dealing with the inhalation of oxygen by normal man are considered some of the physiologic aspects of normal respiration and the physical and chemical changes in the body when a normal person is subjected to increased concentrations of oxygen. The effects of these increased concentrations on the other gases in the blood and on respiration, circulation, and the blood itself are described in some detail.

The etiology, diagnosis, and treatment of anoxia are discussed. Of great importance is the discussion of the ef-

[8]*M. P. Knight, M. D., Dallas.*
[9]*W. R. Houston, M.D., Austin.*
[10]*David R. Womack, M.D., Austin.*
[11]*J. Wade Harris, M.D., Houston.*
[12]*Capt. Edward H. Martin, MC., Fort Sam Houston.*

fects of anoxia and anoxemia on the various body functions, along with a consideration of the numerous abnormal conditions of respiration, circulation, and biochemistry which may result in tissue anoxia. It is pointed out that oxygen inhalation may benefit many of these conditions but may be completely without effect in certain cases and even harmful at times if given in high concentrations.

The therapeutic use of the various physiologic properties of oxygen in conditions without anoxia, a subject of importance usually not considered by the physician, is pointed out.

No explanation of the therapeutic properties of any drug would be complete without discussion of its toxic manifestations. Therefore, the authors describe the harmful possibilities of the inhalation of oxygen. They conclude that no serious harm is likely to result from the lower alveolar concentrations obtained ordinarily with a tent or nasal catheter. However, when attempts are made to use oxygen in concentrations greater than 50 per cent under pressures greater than 1 atmosphere—and such treatment may be distinctly valuable in some cases—great caution should be observed.

The authors have not dwelt upon highly technical or mathematical considerations and have not become involved in controversial subjects, facts which increase the usefulness of the book to the clinician. I recommend this monograph as interesting and useful for the general practitioner and other clinicians and for teaching.

[13]Post-Graduate Lectures on Orthopedic Diagnosis and Indications

Arthur Steindler, M. D., F. A. C. S., Professor of Orthopedic Surgery, State University of Iowa, Iowa City. Vol. 2. Cloth, 184 pages. $6. Springfield, Ill., Charles C. Thomas, 1951.

Most of the conditions seen in the average orthopedic practice are covered in Dr. Steindler's book. Clear and concise lectures present thoroughly the current important advances in each field.

Of particular value is the chapter on infantile paralysis, which clarifies the present status of the development and diagnosis of infantile paralysis in the light of the more recent scientific advances. The chapter on idiopathic scoliosis also is "must" reading for those interested in the crippled spine; the work done by Steindler and his associates for the last twenty years, plus an evaluation of work by other practitioners, is incorporated.

The book as a whole is easily read and highly informative.

[14]Use of Pedicle Flaps of Skin in Plastic Surgery of the Head and Neck

Gordon B. New, M. D., F. A. C. S., Professor of Plastic Surgery; and John B. Erich, M. D., F. A. C. S., Associate Professor of Plastic Surgery, Graduate School, University of Minnesota, Minneapolis, and Section on Laryngology, Oral and Plastic Surgery, Mayo Clinic, Rochester, Minn. Lexide, 104 pages. $3. Springfield, Ill., Charles C. Thomas, 1950.

This monograph is by two outstanding authorities in the field of plastic surgery. The type, make-up, and materials of the publication are of the highest quality. An abundance of photographs and diagrams adequately elucidate and illustrate the text.

The authors discuss the fundamentals underlying the general use of tube and pedicle grafts, and the selection and method of preparation of the proper graft for various lesions and locations.

This monograph will be of inestimable value to the general surgeon in the management of diseases and defects involving the head and neck.

[13]*Herbert E. Hipps, M.D., Waco.*

[14]*John F. Thomas, M.D., Austin.*

ORGANIZATION SECTION

TEXAS MEDICAL ASSOCIATION

EXECUTIVE COUNCIL TO MEET

The Executive Council of the Texas Medical Association will meet Sunday, September 2, at 9:30 a.m. in the Ballroom of the Commodore Perry Hotel, Austin. Dr. Allen T. Stewart, Lubbock, President of the Association, will preside over a session which will include the formal presentation to Dr. Leo J. Peters, Schulenburg, of a bronze plaque awarded to him by the House of Delegates in Galveston as the General Practitioner of the Year 1950.

Dr. Raymond O. Dart, director of the Houston Regional Blood Center for the American Red Cross, has been invited to outline to the Council the blood bank program being carried on in the United States at the request of the federal government. Several councils and committees are expected also to report their activities to the Executive Council.

Some official groups of the Association are planning to confer in Austin the Saturday afternoon preceding the Executive Council meeting. Tentative plans call for meetings of the Council on Medical Education and Hospitals and the Special Committee on Postgraduate Work, Council on Medical Jurisprudence, Council on Scientific Work, Board of Trustees, Board of Councilors, and Committee on Public Relations.

COUNTY SOCIETIES

Brown-Comanche-Mills-San Saba Counties Society

June 4, 1951

Allen T. Stewart, Lubbock, President of the Texas Medical Association, was guest speaker for the annual barbecue meeting of Brown-Comanche-Mills-San Saba Counties Medical Society on June 4 at Gaines Lodge, Lake Brownwood. The wives and friends of members and several visiting doctors also attended.

Gray-Wheeler-Hansford-Hemphill-Lipscomb-Roberts-Ochiltree-Hutchinson-Carson Counties Society

June 19, 1951

(Reported by Raymond W. Laycock, Secretary)

Case of Possible Thrombocytopenic Purpura Secondary to Administration of Tridione—J. R. Donaldson, Pampa.

Radioactive Isotopes and Their Uses—Cleve Beller, Oklahoma City.

The Gray-Wheeler-Hansford-Hemphill-Lipscomb-Roberts-

Ochiltree-Hutchinson-Carson Counties Medical Society met June 19 in Borger. After a dinner H. M. Hamra, Borger, president, called the meeting to order. The program outlined above was given. Fourteen members and three guests attended.

Jasper-Newton Counties Society

May 16, 1951

Harold Bevil, Beaumont, addressed members of Jasper-Newton Counties Medical Society meeting May 16 in Jasper. Tom Jones, Pineland, president, presided.

In a separate session at the home of Mrs. J. W. McCall, Jasper, the auxiliary installed new officers; Mrs. McCall is the incoming president.

Kerr-Kendall-Gillespie-Bandera Counties Societies

July 9, 1951

(Reported by Dor W. Brown, Jr., Secretary)

Bladder Tumors—William Sawtelle, San Antonio.
Group Plan of Income Disability Insurance for Physicians—Mr. Jack Sucke, Austin.

Twelve members and three guests attended the July 9 meeting in Fredericksburg of Kerr-Kendall-Gillespie-Bandera Counties Medical Society. J. E. Wiedemann, Junction, president, presided. The program outlined above was presented.

Lubbock-Crosby Counties Society

July 3, 1951

Problems and Treatment of Poliomyelitis (motion picture).

The above scientific program was presented at the July 3 meeting of the Lubbock-Crosby Counties Medical Society in Lubbock.

Frank B. Malone read an inquiry from the State Health Department regarding postgraduate courses to be held in the district. The inquiry was referred to the program committee for consideration. A letter from the health department regarding the society's request for a full-time medical director of the local health unit was discussed.

Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala Counties Society

April 13, 1951

(Reported by C. R. Sutton, Jr., Secretary)

Diagnosis and Treatment of Breast Tumors—Grant E. Ward, Baltimore.
Diagnosis and Treatment of Carcinoma of Cervix and Fundus—Howard W. Jones, Jr.
Roentgenological Diagnosis of Gastric and Duodenal Lesion—John C. Glenn, Jr., San Antonio.
Resumé of 347 Subtotal Gastric Resections and Benign Lesions of the Stomach and Duodenum—Philip S. Kline, San Antonio.

Louis M. Cartall, Del Rio, president of the Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala Counties Medical Society, presided at the April 13 meeting and dinner in Eagle Pass at which thirteen members were present. James W. Hendrick, San Antonio, introduced the guest speakers, who spoke on the above subjects.

The scientific program was followed by a business meeting at which J. L. Cochran, San Antonio, Councilor for the Fifth District, spoke on current legislation for drafting doctors. Cary Poindexter, Crystal City, moved and James D. Williamson, Castroville, seconded that a program of lay education in the detection of cancer be initiated by the society; the motion carried unanimously.

B. L. Burditt, Del Rio, reminded members of the availability of certain cancer motion pictures and other educational material on cancer. Hershall La Forge, Uvalde, spoke on the American Academy of General Practice.

June 8, 1951

(Reported by C. R. Sutton, Jr., Secretary)

Tracheo-Esophageal Anomalies: Their Diagnosis and Treatment—James W. Nixon, San Antonio.
Surgical Procedures Now Applicable to Pulmonary Tuberculosis—Lawrence M. Shefts, San Antonio.
Technique of Pulmonary Decortication (motion picture).

The Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala Counties Medical Society met June 8 in Del Rio with twelve members and three guests present. The president, Louis M. Cartall, Del Rio, presided. Guest speakers, who were introduced by B. L. Burditt, Del Rio, spoke on the topics outlined above. A dinner followed the meeting.

Nueces County Society

May 8, 1951

Vascular Surgery and Surgery of Sympathetic Nervous System—LeRoy J. Kleinsasser, Dallas.

Dr. Kleinsasser, clinical associate professor at Southwestern Medical School of the University of Texas, spoke on the topic mentioned above when Nueces County Medical Society met May 8 in Corpus Christi. Jerome Nast, president, presided.

June 12, 1951

Diseases of the Adrenal Cortex—Leo J. Geppert, San Antonio.

Lt. Col. Geppert, chief of pediatrics service at Brooke Army Hospital, spoke on the previously mentioned topic when Nueces County Medical Society met June 12 in Corpus Christi.

DISTRICT SOCIETIES

Seventh District Society

June 28, 1951

(Reported by George W. Tipton, Secretary)

The summer session of the Seventh District Medical Society was held on Lake Austin on June 28. Approximately 117 members, wives, and guests were present. Swimming, dancing, picnicking, and boat rides on the "Commodore" were held. No scientific program was presented.

At the short business meeting held, the following officers were elected. George W. Tipton, Austin, president; S. W. Lehmberg, Taylor, vice-president; D. B. Faubion, Austin, secretary-treasurer.

Fourteenth District Society

June 12, 1951

(Reported by L. W. Johnston, Secretary)

Common Systemic Fungus Infections—O. J. Wollenman, Jr., McKinney.
Early Recognition of Carcinoma of the Hypopharynx and Larynx—Donald A. Cargill, McKinney.
Control of Pain with Drugs—F. A. Duncan Alexander, McKinney.
Syphilitic Heart Disease—Ben Friedman, McKinney.
Surgical Lesions of the Stomach—J. Paul North, McKinney.
Ectopic Pregnancy—William F. Mengert, Dallas.
Present Status of Antibiotic Therapy—Major H. J. Baker, San Antonio.
Values of Double Contrast Enema in Radiography of the Colon—Robert D. Moreton, Fort Worth.

The above scientific program was presented at the seventh annual meeting of the Fourteenth District Medical Society on June 12 at the Veterans Hospital, McKinney. Eugene L. Aten, Dallas, spoke on "The Emotional Growth of Children" at the luncheon session. Frank Selecman, Dallas, Councilor of District 14, addressed the members at the business session. Members of the Woman's Auxiliary met with the physicians for a luncheon. Collin County Medical Society entertained with a buffet barbecue supper at the Country Club.

AUXILIARY SECTION

ANNUAL REPORTS OF COUNTY AUXILIARIES

(EDITOR'S NOTE: This is a continuation from page 518, July, 1951, issue of the JOURNAL of the annual reports presented by county auxiliaries at the annual session of the Woman's Auxiliary to the State Medical Association of Texas in Galveston, April 29 and 30 and May 1 and 2, 1951.)

Caldwell County

The Woman's Auxiliary to the Caldwell County Medical Society was reorganized in April, 1950. There are 7 active members. Regular meetings are held every two months in conjunction with meetings of the Gonzales, Guadalupe, Caldwell, and Hays-Blanco Counties Medical Societies.

Motion pictures on nursing have been shown to Lockhart and Luling High School girls. Ten girls showed an active interest in nursing as a career.

The auxiliary plans to sponsor the "Healthy Living in Our County" programs on the radio in Caldwell County this year.

MRS. E. P. WALLER, Luling.

Cameron-Willacy Counties

The meetings of the Woman's Auxiliary to the Cameron-Willacy Counties Medical Society are held the third Monday evening of each month from October to June. The medical society meets at the same time and after dinner we have our meeting.

We got off to a slow start this year but as a result of a visit from our State President, the members have become more interested and active in Auxiliary work. Mrs. William M. Gambrell, Austin, met with us at a special luncheon meeting January 29 and offered some helpful suggestions. We are attempting to set up a plan that will be workable in this auxiliary. Each of the seven towns represented in Cameron-Willacy Counties will have a general chairman and a representative of each of the committees such as public relations and legislation to work in her own locality under the direction of the officers of the auxiliary and the committee chairmen.

MRS. K. A. ROTH, Harlingen.

Cass-Marion Counties

The Cass-Marion Counties Auxiliary meets bimonthly in joint session with the doctors for supper. After the meal the auxiliary meets separately.

Most of our meetings are social and business as there is usually much accumulated business over a two-months period. We do not find it practical to have a program every time. Also the fact that there are five towns represented and the members do not have an opportunity to visit often makes our fellowship at auxiliary meetings especially enjoyable.

We have tried to conduct all business as it came into our hands. Every piece of mail received was acted upon and answered.

We sponsored a nurse recruitment motion picture at the beginning of the year in the four high schools in Cass and Marion Counties and plan to show another in April.

Our members have spent many hours in public relations work.

We enjoyed a joint meeting with the Harrison County Auxiliary when our National President, State President, and State President-Elect were with us.

We feel that although we have done nothing outstanding, we can report a year of good fellowship, better understanding among ourselves and with our lay friends, and a clearer understanding of auxiliary aims.

MRS. W. S. TERRY, Jefferson.

Cherokee County

The Cherokee County Auxiliary had 20 paid members last year with 19 paid members to date.

Legislation and public relations were emphasized in our meetings, with a short talk by our legislative chairman at each meeting. We had five speakers during the year outside our own group: one open public relations meeting, a book review, "The Road Ahead" by John Flynn, and one talk to our group, "Public Relations and Its Aim," by a lawyer, Paul Cox. Also, in February we had radio talks for Doctor's Day.

Our members worked for 20 hours on the Community Chest and similar projects.

We placed *Today's Health* in 10 business houses, a college, and the Negro school.

We were 100 per cent in *Bulletin* subscribers and had a good many JOURNAL readers among our members. Seventeen auxiliary members, 7 doctors, 30 children, and 16 servants had physical examinations.

For our Doctor's Day celebration we had a banquet with many guests, and the Rev. Hoyt Boles of Denton gave the address.

We interested two girls to take up nursing—one white, one Negro—and both are in training now.

MRS. L. L. TRAVIS, Jacksonville.

Colorado-Fayette Counties

In addition to the monthly social meetings of the Colorado-Fayette Counties Auxiliary, our 11 members have worked with the Red Cross and Community Chest and have talked on current medical legislation and nurse recruitment.

MRS. JOHN R. LAUGHLIN, Eagle Lake.

Dallas County

The master plan for the social work of the Dallas County Auxiliary this year has been twofold: to make each new member feel welcome by having someone from the courtesy committee call on her to see what branch of our work was most interesting to her and to have our programs so varied in form and content that everyone would enjoy them, thus increasing our attendance. A hostess was provided at each table at our regular monthly luncheons to see that everyone was introduced. A tea honoring our new members in October and a ranch party in April honoring our husbands were held. A tea for the members of the executive board, honoring Mrs. William M. Gambrell, Austin, our State President, was held in February. March 30 was designated as Doctor's Day; we provided each doctor with a red carnation for his buttonhole and presented bouquets of red carnations to Dr. Curtice Rosser, president of the Southern Medical Association, and Dr. Charles Martin, Dallas County Medical Society president. More than 24 articles and pictures have appeared in local newspapers regarding auxiliary work and activity. These functions in addition to our regular monthly luncheons comprise our social activities for the year.

Our philanthropic work has been a source of great satisfaction. More than 400 members have given 12,857 hours

of work as well as 673 telephone hours to various branches of community service. Our new project this year has been to help the city-county health nurses test the visions of 1,100 children, to weigh and record the weights, and to make Wetzel grid charts, evaluating the physical fitness of children in a school comprised for the most part of so-called "underprivileged children." More than $600 has been spent by our auxiliary in philanthropic contributions.

Our educational program has been concerned with legislation as well as health. Literature protesting communism was distributed on Guest Day to 400 members and guests. Each one was asked to pass this information on to five persons, requesting them to write their Congressmen and Senator protesting any form of communism in our government.

A film on nursing has been shown to approximately 850 prospects and 13 talks have been made by the nurse recruitment committee. Of the girls reached 220 indicated they were interested in nursing and a list of their names has been sent to the four nursing schools in Dallas.

More than 200 letters were mailed to program chairmen of Parent-Teacher Associations apprising them of the visual education, health literature, and health lecture programs sponsored by our auxiliary. As a result the motion pictures have been shown 53 times to 3,096 people, 7,000 pieces of health literature have been distributed, and 20 health talks have been given.

About 60 students have received instruction in parent-craft classes at the Health Museum.

We have secured 301 subscriptions to *Today's Health* and 71 to the *Bulletin*. The physical examinations committee reports 1,431 examinations for families of doctors.

MRS. J. SHIRLEY HODGES, Dallas.

Denton County

The Woman's Auxiliary of the Denton County Medical Society had its first meeting in October with the State President, Mrs. William M. Gambrell, Austin, as our guest.

Our goal for the year was improvement in public relations. Three of our members are Girl Scout leaders, 2 are active on the Health Council, and 1 assisted in patch testing 500 children. We sponsored the sale of tuberculosis seals at the Negro school, giving a cash award to the room selling the most seals. We presented cheer baskets to two needy families at Christmas and also trimmed the hospital with gay Christmas decorations. Our auxiliary gave $5 to each of the following funds: cancer, heart, Red Cross, and March of Dimes. Our largest project of the year was the mobile x-ray unit. This unit was in the city a week—all auxiliary members working with assistance from members of the women's clubs.

In the legislative field we have been succesful in informing ourselves and friends on all vital legislative matters through reading and the distribution of literature. An interesting meeting was devoted to a talk on legislative bills and problems before Congress. We have a book shelf at the public library containing informative leaflets, literature, and books.

Our social life was not overlooked; our annual benefit game party for the townspeople was successful. Proceeds from the party were given to our hospital memorial fund and to civic projects. We had a guest luncheon at which a book review was given, and our last and enjoyable meeting was a picnic for our husbands.

MRS. ALBERT E. WYSS, Denton.

De Witt-Lavaca Counties

De Witt-Lavaca Counties Auxiliary, which meets quarterly, celebrated its twenty-seventh birthday in April. Mrs. E. H. Marek was elected to serve the unexpired term of the president, Mrs. J. D. Gerdes, who resigned when Dr. Gerdes entered the Armed Forces. Sixteen members from Cuero, Hallettsville, Shiner, and Yoakum attended one business meeting in Yoakum and a luncheon honoring the State President, Mrs. William M. Gambrell, Austin, on January 27. Special guests were Mrs. A. H. Neighbors, Austin, Seventh District Council Woman, and Mrs. R. T. Wilson, Austin, State Publicity Secretary. Mrs. Gambrell spoke on "Responsibilities of Auxiliary Members."

Dr. George A. Schenewerk, Dallas, spoke at the public relations tea in Cuero, April 7, when auxiliary members and guests from organizations in the two counties attended. Members attended a tea given by our Council Woman, Mrs. F. J. L. Blasingame, Wharton, honoring Mrs. Gambrell.

Thirty-two physical examinations were reported. Twelve *Bulletin* subscriptions and 3 subscriptions to *Today's Health* were sold. Among the 24 members are 20 STATE JOURNAL and 4 *Journal of the American Medical Association* readers. Two articles have been sent to the STATE JOURNAL.

Contributions have been made to the Memorial, Student Loan, and Library Funds of the Auxiliary and to the Gonzales Warm Springs Foundation, Cancer Society, Heart Association, and Christmas seals drive. Auxiliary members are active in Red Cross, Girl Scouts, Parent-Teacher Association, Texas Federation of Women's Clubs, and other lay organizations.

Two motion pictures have been shown to the junior high school health classes. Four student nurses have been recruited.

MRS. E. H. MAREK, Yoakum.

Eastland-Callahan-Stephens-Shackelford-Throckmorton Counties

Our Auxiliary is new, having grown out of the merger of Stephens, Shackelford, and Throckmorton Counties and Eastland-Callahan Counties Medical Societies. Eastland and Callahan Counties only had an auxiliary.

Though there are only 38 doctors in this five county area, we feel we have done fairly well in these few months to have 18 paid members. Our area being so sparsely settled, our worst problem is getting enough members to attend each bimonthly meeting to have good programs. We hope to overcome this difficulty and to be better known as an organization in each town.

MRS. W. S. PARKS, Breckenridge.

Ector-Midland-Martin-Howard-Andrews-Glasscock Counties

The Ector - Midland - Martin - Howard - Andrews - Glasscock Counties Auxiliary feels that it has had a successful year. Our largest gain is in membership. We now have 72 paid members, which doubles our membership of last year.

Through Mrs. H. P. McCrimmon's efforts we got 41 new subscriptions to *Today's Health*. Our program chairman, Mrs. J. S. Roden, gave a year of fine programs. Two were book reviews: "The Road Ahead" and "Smile Please." The motion picture "Human Growth" was presented and two social meetings were held. One of the latter was a social with our husbands at which a magician entertained us.

At one meeting we toured the new government hospital in Big Spring. Because of our new constitution, we have had to have two business meetings. As a result of great distances we must drive to attend meetings, average attendance was 28.

In March at the district meeting in Midland we had the pleasure of a visit from our State President, Mrs. William M. Gambrell, Austin.

MRS. JOHN E. BAUMAN, Odessa.

Ellis County

The Ellis County Medical Auxiliary had three meetings in 1950-1951. These luncheon meetings were attended by from 15 to 18.

We have 15 paid members. Two subscriptions to *Today's Health* have been contributed to Sims Library and 1 has been given to the Waxahachie Negro school, and $5 has been contributed to the Memorial Fund. All members have assisted in Red Cross and community work.

MRS. S. H. WATSON, Waxahachie.

El Paso County

The Woman's Auxiliary to the El Paso County Medical Society has as members practically 100 per cent of eligible doctors' wives in El Paso. This year emphasis has been placed on getting the new members into the active work of the Auxiliary.

The usual activities of the Auxiliary were carried out: collecting dues; putting on luncheons and teas; seeing that the Turner Memorial Home was kept in readiness for meetings; compiling the yearbook; decorating for meetings and parties; keeping track of our publicity, which was done by the historian; and other routine jobs which make the auxiliary run smoothly.

Work and projects suggested by the State and National Auxiliaries were performed to the best of our abilities.

The public relations chairman wrote the president of women's organizations in the city offering the services of her committee in setting up programs and obtaining speakers for them. Many calls for programs were made on this committee. The chairman also arranged a tea for presidents of fifty women's organizations and arranged for a program by the physical examinations committee, which presented a motion picture on cancer. In addition, members of the physical examinations committee urged doctors' families to have examinations. Publicity on social affairs was kept to a minimum, while civic work of the auxiliary was stressed at every opportunity. A monthly radio program explaining the work of the auxiliary in El Paso was given to improve public relations. This program explained the work of our committee which visits children in the hospital regularly to show them movies and play records; showed the work of the cancer dressings committee headed by a doctor's wife; explained the nurse recruitment program; told about collection of samples of medicine from doctors' offices to be given to the free clinic of the city; and reported other work done by the auxiliary for the city.

A benefit card party was held at which more than $200 was raised. This money went to the nurse scholarship fund for Hotel Dieu Sister's Hospital. But the project of which the auxiliary is proudest is the way in which it has been able to answer what seems to be the number one problem of the Auxiliary on all levels: getting new, young members to participate actively. Through every means known to us we have tried to make our new members feel at home, to become one of us, and to use their talents for our fight against socialism. We are proud to say that all of our new members are working and active.

One piece of work in El Paso was not done directly by the auxiliary. The wife of one of our doctors was able to convince the El Paso Woman's Club that it should conduct a contest among women's organizations in the city to see which would be responsible for getting the most poll taxes paid. It was a huge success. In 1950 there had been an all-time high of 27,000 poll taxes paid, because of the great interest in Congressional elections. This year no one expected more than 20,000 to be paid because it was not an election year. The women were successful in getting more than 32,000 paid—an all-time record. This contest is easily conducted and could be a project for any auxiliary. The El Paso Auxiliary will be happy to supply details.

MRS. L. W. BRECK, El Paso.

Erath-Hood-Somervell Counties

Since our members are scattered over four or five towns, the Erath-Hood-Somervell Counties Auxiliary has not been active as an auxiliary this year. However, our members have been active in other groups. Our dues have been paid and we hope soon to elect officers and make plans for next year.

MRS. CARL A. JORDAN, Dublin.

Galveston County

This year the Galveston County Auxiliary has carried an educational theme through all its plans.

The theme began with our yearbook. It gives historical bits; an explanation of the ties of interest between national, state, and local auxiliaries; and the twelve-point program of the American Medical Association. It explains also the funds we support and the budget.

"Know your auxiliary" was emphasized briefly in some way at each meeting.

We had two programs of special interest. One in quiz fashion on "What the Lay Person Wants to Know About the Health Facilities in His County," was led by Dr. Virginia Blocker. The other was a skit copied from "Rehearsal for Duty" but rewritten to meet specific local problems. Directed by Mrs. Edward R. Thompson and Mr. Arthur Graham, a local speech teacher, it was designed to help the new officers in their duties.

Much work has been done to bring the membership list up to date. Thirteen new members have been added. A junior membership was established for wives of interns and residents of recognized hospitals in the county in place of our old "courtesy list."

Our auxiliary has sponsored the radio project "Healthy Living in Our County" for the second year.

The rest of the year, in addition to the matters previously mentioned, will be concerned with plans for the annual session in Galveston.

MRS. JOHN W. MIDDLETON, Galveston.

Gonzales County

Gonzales County Auxiliary was organized a year ago at Gonzales. All wives and two widows of physicians in the community belong.

Our 7 members have tried to carry out the state aims and objectives, as well as to serve our doctors and become better acquainted with each other socially. They have sponsored a nurse recruitment program in high school, and placed *Today's Health* in beauty parlors and waiting rooms.

Three Red Cross home nursing classes were taught by the county auxiliary president.

MRS. J. C. PRICE, Gonzales.

Gray-Wheeler-Hansford-Hemphill-Lipscomb-Roberts-Ochiltree-Hutchinson-Carson Counties

The Gray-Wheeler-Hansford-Hemphill-Lipscomb-Roberts-Ochiltree-Hutchinson-Carson Counties Auxiliary has 35 paid members. During the past year 2 social meetings, 6 business meetings, and 1 executive board meeting were held. Subscriptions to *Today's Health* number 26 and to the *Bulletin* 1. A donation of $50 was made to the Student Loan Fund.

MRS. WALTER PURVIANCE, Pampa.

Grayson County

The Grayson County Medical Auxiliary is completing a year varied in interest and worthy achievement. We opened

the year with a coffee honoring our 11 new members. This was followed in November with a seated tea at which our State President, Mrs. William M. Gambrell, Austin, was presented to 200 of our friends. At the Christmas dinner for our husbands the guest speaker was the public relations counsel for the State Medical Association. Two other luncheon speakers were from Perrin Air Base.

Our group has kept informed regarding pending medical legislation and has sponsored a high school discussion "The Welfare State Should be Rejected."

Two student nurses from Grayson County are using our loan fund which also will be available to two more students this fall. To publicize this fund and aid nurse recruitment, we obtained an appropriate movie on nursing as a career and showed it to girls in seven high schools throughout the county.

Physical examinations were stressed this year and from our households 83 examinations were reported. The auxiliary acted as hostesses for the mobile x-ray unit, sponsored by the Texas Tuberculosis Association.

Members of our Auxiliary have attended district, state, and national conventions. We point with pride to the fact that the incoming district president and the State Treasurer are from our fold.

This year our rolls include 45 active members and 10 associates, dentists' wives whose help and loyalty means much to us.

MRS. F. M. SPORER, Van Alstyne.

Gregg County

The Gregg County Auxiliary had six luncheon meetings with a business meeting following. We also had four committee meetings.

The Student Loan Fund has continued to be our main project. It was created last year to be used for the training of Gregg County girls in nursing, medicine, and the associated technical phases of medicine. We shall have sufficient funds by the end of this year to start some girl in training.

Today's Health was placed by the Gregg County Auxiliary in the junior and senior high schools of the county which were not already getting them, both white and Negro.

In December 12 members donated two hours each to the folding of tuberculosis seals.

We plan to entertain our husbands in April. The high point of the year was in November when our State President, Mrs. William M. Gambrell, Austin, visited us. In January the auxiliary was invited by the Harrison County Auxiliary to a seated tea honoring our National and State Presidents and State President-Elect. Each brought an interesting and instructive message.

We have sent in our state and national dues for 34 members, and we have 1 honorary member.

MRS. R. J. VAN SICKLE, Longview.

Grimes County

On February 22 the doctors of the Grimes County Medical Society met with their wives in Navasota for supper to discuss the organization of a Grimes County Medical Auxiliary. Mrs. Mark Latimer, Houston, Council Woman of District 9, was a guest. Mrs. Marius Hansen, Old Washington, was elected president and Mrs. H. L. Stewart, Navasota, secretary-treasurer.

MRS. MARIUS HANSEN, Old Washington.

Harris County

The Woman's Auxiliary to the Harris County Medical Society has a paid membership of 552 regular members of which 25 are chapter members, 3 honorary members, and 4 associate members. Forty-five of these are new members.

Regular meetings are held the last Monday of each month. The programs have included an open health meeting, to which friends were invited and at which health movies were shown with discussion by local doctors. Participants on a panel discussion on "Available Community Health Facilities" included the supervisor of nursing service of the Harris County Health Unit, the executive director of Goodwill Industries, and the chairman of the Executive Committee of the Health Section of the Community Council.

The auxiliary held a joint meeting in November with the Auxiliary to the South Texas District Medical Society to which guests of the Post-Graduate Medical Assembly were invited. Guest speaker was Mrs. William M. Gambrell, Austin, State President. Officers of the auxiliary entertained the members with a tea in October, and new members and their husbands were honored at Christmas time with a dinner dance. Family fun is on our program too, with a party for all the family in May. Attendance has been good at all these meetings, with an average of 153.

Executive board meetings are held two weeks prior to the regular meeting, in the homes of the members. These meetings are reported in detail in our news letter, which goes to all members. This letter also serves as a reminder of the next regular meeting so that reservations for the luncheon may be made.

The telephone committee has responded to many calls from the auxiliary president and the president and members of the Harris County Medical Society, whom they have aided in telephoning doctors.

The Tuberculosis Hospital committee gave its annual Christmas party for Ward 4 of the hospital and presented the ward with a television set. Children at Autrey Memorial Hospital School for children of tuberculous parents were entertained at Christmas time. The auxiliary provides house shoes and cod liver oil for these children.

We have a representative on the board of the Cerebral Palsy Center. Seventy members of the auxiliary work in groups at the M. D. Anderson Hospital for Cancer Research, every Friday of the month, and have just completed folding 10,000 dressings.

Sixty-five subscriptions to *Today's Health* and 40 subscriptions to the *Bulletin* have been sold.

Our nurse recruitment program has been conducted under the direction of the Red Cross Home Nursing Service. Six-week home nursing courses are given by the Red Cross in the various high schools of Harris County. After completion of the course a member of the nurse recruitment committee of the auxiliary, accompanied by a senior nurse from one of the hospitals, is invited to speak to the students to explain and if possible to interest them in nursing as a career. This year five schools have been visited with 825 students reached. Fifty-three of these students are interested in nursing as a career. In addition, because of newspaper publicity, we have had requests from several out-of-town prospects; letters and literature have been sent to these girls.

A nursing scholarship has been awarded to Miss Vida Lury, a student at the University of Houston. We also have a scholarship student graduating in June from Hermann Hospital.

The radio program "Healthy Living in Our County" has presented twenty-seven programs with 28 schools participating. Between 40 and 50 schools listen to the program. The program has been presented with full cooperation of all departments in the county health unit and with school superintendents and teachers. Schools participating were within a 35 mile radius of Houston.

We have cooperated in all community drives; members have worked on Community Chest, polio, tuberculosis seals,

crippled children Easter seals, heart, and cancer drives. Members have sold tickets to the Horse Show, which benefits the Children's Hospital.

The public relations committee has spent 92 hours helping the public relations committee of the Harris County Medical Society with its clippings bureau and other projects.

A new committee has been organized to work with the Red Cross Home Nursing Service to recruit graduate nurses from the auxiliary membership to take a Red Cross home nursing course. Upon completion of this course these members may instruct other classes in home nursing courses.

In keeping with our State President's theme for the year—"He who dares to lead must never cease to learn"—the legislative committee has organized a study group which meets once a month. A subcommittee was appointed to survey current periodicals for articles of interest in our fight against socialism, and a general information sheet is mimeographed prior to each meeting. This sheet contains suggested reading, quotations from well informed persons, and announcements of the next meeting.

Most of our speakers have been chosen from auxiliary members, with a discussion period as part of the program. This has proved to be important in clarifying the thinking of the group. Current legislation is discussed at each meeting. The bills are discussed according to their provisions, progress in committee, possibility of passage, and objections to them.

Plans are being completed for an open meeting to be held March 30. At this meeting a videograph presentation of "This Is Our Problem, a Study of the American Way" will be given. The videograph is a new means of visual education, developed by Harding College in Searcy, Ark., consisting of a combination of the flash card and slap board techniques. Representatives from women's clubs, church groups, Parent-Teacher Associations, and other groups are being invited to encourage them to include a similar presentation by the auxiliary in their own programs next year.

This study group is not the only activity of this committee, however. The chairman in April sent a letter to the presidents of all Federated Women's Clubs, informing them that the auxiliary maintains a speaker's bureau and would be happy to supply any club with a competent speaker on any phase of socialism. During the year our speakers appeared before twelve clubs. The committee has worked constantly to keep current legislation before the entire membership and has distributed pamphlets.

Harris County boasts of a chapter organization. The East Harris County Chapter was organized in Baytown last spring to promote friendship and sociability among doctors' wives in that part of the county. Their meetings have been held at night at the same time as the doctors' meetings, with the doctors joining them for refreshments later. They have a membership of 25 and have just completed a successful year; plans are being made to broaden the scope of their activities in the coming year. Many of them have attended the study groups and regular meetings of the Harris County Auxiliary.

MRS. GUY E. KNOLLE, Houston.

Harrison County

The 14 members of Harrison County Auxiliary met throughout the year for a variety of programs including a book review and a tea open to the public and honoring Mrs. William M. Gambrell, Austin, President, and Mrs. O. W. Robinson, Paris, President-Elect of the State Auxiliary, and Mrs. Arthur A. Herold, Shreveport, La., President of the Auxiliary to the American Medical Association.

The auxiliary members participated in Red Cross, Community Chest, Heart Association, and cancer drivers, and initiated action to establish a hospital auxiliary. A sewing machine was donated to the local hospital. Contributions of $5 each were made to the Memorial and Student Loan Funds, Red Cross, and Empty Stocking Fund.

Sponsoring of health programs on the radio and an effort to encourage interest in legislative matters among other civic groups helped also to keep members of the auxiliary enlightened on subjects of interest to the medical profession. All members read the State and American Medical Association publications.

MRS. JOHN E. HILL, Marshall.

Hays-Blanco Counties

The greatest single effort of the Woman's Auxiliary to the Hays-Blanco Counties Medical Society this year has been public relations. Auxiliary members have taken part in Red Cross, infantile paralysis, cancer, and Boy Scout and Girl Scout drives, also, Parent-Teacher Association programs and plays. One of our members has charge of the Brownies and another is a den mother for the Cub Scouts. Models will represent us in the Beta Sig annual style show. During the year we have had a series of radio transcriptions over KCNY, San Marcos, on Saturday mornings.

We have entertained and served refreshments to the men from a nearby air field.

MRS. M. D. HEATLY, San Marcos.

Henderson County

The Henderson County Auxiliary held four meetings during the past year with most members present at each meeting. Interesting programs were given, ending with a social hour each time. We had book reviews by students of the high school.

The auxiliary entertained the doctors of the county at dinner, every doctor and his wife in the county being present.

We sent delegates to district and State meetings, entertained our district president, and took an active part in all matters of interest to the county and State auxiliary.

MRS. MELVIN WILCOX, Athens.

Hidalgo-Starr Counties

The Auxiliary to the Hidalgo-Starr Counties Medical Society holds its meetings the second Thursday of each month from September to June in conjunction with meetings of the county medical society. The auxiliary had 34 members this year.

Our meetings have been predominately social. The society specifies the meeting place for the month and we have dinner together before our meetings. The auxiliary arranges the tables and provides suitable decorations.

We have entertained the doctors with a barbecue and a Christmas program and plan to have a dinner party for them in May. Other meetings have been business and social. We have tried to promote attendance by providing programs of common interest and hope to have a better working auxiliary next year.

Following last year's precedent, a yearbook, containing our year's program; national, state, and county officers; past county presidents; our members; and our constitution and by-laws was compiled.

MRS. JACK PRUITT, McAllen.

Hopkins-Franklin Counties

Programs on coronary artery disease and respiratory diseases, nursing as a career, and auxiliary organization and projects were held during the past year by the Hopkins-Franklin Counties Auxiliary. In addition, a Christmas party honoring doctors of the area and a special program on the Metropolitan Opera gave variety to the year's activities. Members of the auxiliary participated in the projects recom-

mended by the National and State Auxiliaries, especially in the reading of suggested publications. A contribution to the Library Fund indicated further the interest of members in books and literature.

MRS. HENRY E. STANFORD, Mount Vernon.

Hunt-Rockwall-Rains Counties

The Woman's Auxiliary to the Hunt-Rockwall-Rains Counties Medical Society met October 10 for Reassembly Day. A business meeting was followed by dinner and a program. Local doctors took part on the musical program. The auxiliary has met for eight consecutive months, extending through May.

We have 34 active and 14 associate members with an average attendance of 25. We received 100 per cent dues from the active membership. Three new members were admitted during the year.

The December meeting, designated as Doctor's Day, consisted of an evening banquet. Guest speakers were Dr. and Mrs. William M. Gambrell, State Presidents of the Association and Auxiliary respectively. During the program a motion picture on atomic energy was shown.

In our auxiliary work we have stressed legislation and public relations. A legislative chairman was appointed to keep the auxiliary informed on important bills and legislation. Realizing the lack in local papers of interpretation of legislative action on socialized medicine, a committee from the society was appointed to work jointly with the auxiliary committee to investigate the reason for the neglect. Auxiliary members worked with and contributed to the Red Cross, Community Chest, March of Dimes, and Texas Tuberculosis Association drives.

During the year physical examinations were given to 19 auxiliary members, 10 doctors, about 90 per cent of the children, and 100 per cent of the maids.

Members subscribed 100 per cent to *Today's Health*. The executive board subscribed 100 per cent to the *Bulletin* with 5 additional subscriptions.

The auxiliary's objectives included becoming better informed and more active in public relations. Programs embodied music day, health day, banquet night, two guest days with book reviews by outside speakers, a July 4 picnic, and other business and social meetings.

MRS. JOE BECTON, Greenville.

Jasper-Newton Counties

After reorganizing in April, 1950, the Jasper-Newton Counties Auxiliary went forward during the year with a membership of 11, including 1 associate member, and a series of programs which included films on poliomyelitis, a report on socialized medicine, and a Christmas party for members of the auxiliary and the medical society. The auxiliary accounted for 10 subscriptions each to *Today's Health* and the *Bulletin*.

MRS. J. W. MCCALL, JR., Jasper.

Jefferson County

The Women's Auxiliary to the Jefferson County Medical Society is continuing with the two chapters, Beaumont and Port Arthur. This year officers are from Port Arthur.

The Beaumont group has had three guest speakers, Mrs. Paul Brindley, Galveston, talked on "The Role of the Medical Auxiliary in Community Health." "Individual Responsibility as a Citizen" was the subject of Mrs. W. F. Ivers, Beaumont. Mr. Fry, Beaumont hospital director, had as his topic "What We Should Know about Voluntary Prepaid Hospital and Medical Care."

Dr. Marjorie Shearon, editor of "Challenge to Socialism," spoke to the Port Arthur chapter about the Washington scene and socialized medicine. Representatives from auxiliaries in Beaumont and Orange and from civic organizations in Port Arthur attended this meeting.

In October we went to Orange to hear our State President, Mrs. William M. Gambrell, Austin, speak on our duties, responsibilities, and privileges as doctors' wives. Many in the Tenth District were there.

As an organization we have worked with and donated to the tuberculosis bangle sale, March of Dimes, and cancer, crippled children, and American Heart Association drives.

The Port Arthur Chapter voted to give an award of $50 each year to the "Best All Around" senior nurse who desires postgraduate work to encourage postgraduate study.

The Jefferson County Auxiliary presented 20 subscriptions of *Today's Health* to schools throughout the county and secured 80 other subscriptions.

We have 126 members, an increase of 9 active and 14 honorary members, making a total of 140.

The local charity institutions are still supplied by the sample drugs which our auxiliary collects from the doctors' offices.

The Port Arthur Chapter has set up a memorial fund to help promote research in cancer, poliomyelitis, and heart diseases, so that persons who wish to pay tribute to departed relatives or friends may contribute. Mrs. J. M. Loewenstein, chairman, has received $54.

The legislative chairmen, Mrs. J. C. Crager, Beaumont, and Mrs. Frank Keith, Port Arthur, have diligently reported the contents of Dr. Shearon's pamphlet "Challenge to Socialism" and have kept us up to the minute about news on medical affairs.

MRS. L. C. HEARE, Port Arthur.

Johnson County

A silver tea for the benefit of the Gonzales Warm Springs Foundation was one of the high lights of the year for Johnson County Auxiliary. Other programs ranged from folding bandages in the hospital to a discussion of dental subjects and a Christmas party. A membership of 16 with 5 associates participated in Kings Daughters, Scout, Camp Fire, and Gonzales Foundation activities, and $10 was donated to the Goodfellow Fund at Christmas time.

MRS. GLENN R. WRIGHT, Cleburne.

Kaufman County

The Kaufman County Auxiliary is inactive, but the wives of doctors meet at Christmas time for dinner with the medical society.

MRS. WILLIAM DE VLAMING, Kaufman.

Kerr-Kendall-Gillespie-Bandera Counties

The Woman's Auxiliary to the Kerr-Kendall-Gillespie-Bandera Counties Medical Society has a membership of 36, with an average attendance of 21 at meetings. Six publicity reports were sent the STATE JOURNAL and 9 to our local papers. Our total subscriptions to *Today's Health* numbered 52, including 11 gift subscriptions to the schools in our counties.

The October meeting opened our year's activities with a tea honoring Mrs. William M. Gambrell, Austin, State President, at the home of Dr. and Mrs. Sam E. Thompson, Kerrville. Mrs. Gambrell spoke on the aims and objectives of the national auxiliary. At the March meeting Tod Bates, Executive Secretary of the State Medical Association, spoke.

Again our foremost project of the year was sponsoring the tuberculosis seal sale in Kerr County, which collected $1,700 for 1951. The Kerr County Tuberculosis Association, sponsored by the medical auxiliary, paid for 86 x-rays and gave 1,200 patch tests.

Ten lectures on current medical legislation were given to lay groups. Local newspapers and radio stations were cooperative with our educational program. Study periods on current legislation were held at each monthly meeting.

Food and clothing were collected at Christmas for two needy families in our area; $32 was presented to the Red Cross chairman for additional provisions.

Two talks on nurse recruitment were given to the girls in the senior class of the Kerrville High School, with a result of four candidates. The candidates were taken on a tour of the San Antonio hospitals this spring.

We were guests of the medical society at one of its meetings at the Veterans Administration Hospital, Legion.

Our final meeting will celebrate Doctor's Day.

MRS. DOR W. BROWN, Fredericksburg.

Lamar County

The Woman's Auxiliary to the Lamar County Medical Society in the last few years has been relatively inactive except as a social organization; however, this past year the auxiliary has been meeting the first Thursday of each month.

These meetings have been morning coffees for the convenience of a majority of the members. We have had a brief business meeting and discussed pertinent subjects of current interest to the medical society; however, such meetings have created a better understanding and closer friendship for newcomers as well as for the older members, some of whom had only a slight acquaintance with one another.

We have had five morning meetings, two luncheons, and one Christmas dinner as guests of the medical society. Our newly elected officers will preside at their first meeting at the annual Doctor's Day picnic the first Thursday in June.

At present we have 18 active members, 6 associate members, and 6 honorary members.

MRS. M. A. WALKER, JR., Paris.

LaSalle-Frio-Dimmit Counties

The LaSalle-Frio-Dimmit Counties Auxiliary is located in sparsely populated southwest Texas. Our meetings are few and our membership low. We are unable to follow the organized program of the Auxiliary but we take an active part on all issues of interest to the Auxiliary on local, state, and national levels.

MRS. CLYDE P. MYERS, Cotulla.

Liberty-Chambers Counties

The Liberty-Chambers Counties Auxiliary has 12 active and 3 honorary members. Our meetings are held the second Thursday of each month in Liberty.

Our program this year has stressed current legislation pertaining to medical problems. During ten minutes at each meeting our legislative chairman, Mrs. R. C. Bellamy, discusses any pending federal legislation. Our other programs have dealt with "Medical Current Events," and for self education we are having discussions on "It's Your Crusade, Too" and "The Road Ahead."

We have 100 per cent subscription to the *Bulletin,* and most of our members subscribe to *Today's Health.* Gift subscriptions of *Today's Health* have been made to two county hospitals.

Six members attended a tea in Orange in October honoring the State President, and four of our members attended the meeting in Houston last November, at which time the South Texas Medical Auxiliary was disbanded. We hope to have a good representation at the Tenth District Medical Society meeting in Port Arthur on March 3 to assist in organizing the Tenth District Medical Auxiliary.

We have given to the Memorial and Student Loan Funds and purchased a Gold Seal Tuberculosis Bond. A nurse scholarship was established at the close 1950 year and we are sending a girl from Liberty through St. Joseph's School of Nursing in Houston.

Our Christmas party was December 19, and on May 10 we will have our annual doctor's supper for our husbands and families. On April 18 we will have our public relations tea. All our members have had physical examinations, as have their children and servants.

MRS. REGINALD WILSON, Dayton.

Lubbock-Crosby Counties

The Lubbock-Crosby Counties Auxiliary, with 64 active members, held nine luncheon-business meetings during the year and one meeting with the Potter County Auxiliary. The October meeting was held during the meeting of the Third District Medical Society, and we were fortunate in having Mrs. O. W. Robinson, Paris, State President-Elect, and Mrs. Ben T. Blackwell, Amarillo, Third District Council Woman, with us. During the district meeting we helped with the registration of doctors and held a banquet and entertainment for visiting doctors and their wives.

The main activity of the auxiliary is working with the Red Cross blood bank twelve months of the year, two days each week.. We help with the registration and examination of patients, set up equipment, help the doctors take blood, and work in the canteen. One member, Mrs. J. H. Stiles, is chairman of the Lubbock Red Cross chapter. We assisted the Lubbock Tuberculosis Association by acting as hostesses during x-ray examinations for one week in Lubbock and two days in Slaton. The auxiliary assisted the Texas Crippled Children's Society in getting out its Easter Seals. Twelve wives of Rotary Club members assist with the club's project, the Cerebral Palsy Treatment Center, twelve months of the year by acting as secretaries and occupational therapists and assisting in the crippled children's clinic and the six cerebral palsy clinics.

Members were urged to have physical examinations of their families and servants.

MRS. W. H. GORDON, Lubbock.

McLennan County

The Woman's Auxiliary to the McLennan County Medical Society considers the year 1950-1951 one of its most successful in several years, for not only have our programs and meetings been interesting and inspiring but our public relations projects have reached an all time high. We have achieved a long sought goal in establishing a fund to assist nurses in our two local nursing schools. It is our hope that this fund will grow into a nursing scholarship.

Our year began with a luncheon meeting, with county presidents from the Twelfth District as guests. Mrs. Zora M. Fiedler, dean of Nursing Education at Baylor University, discussed nursing and its future and suggested ways in which the medical auxiliary could aid in nurse recruitment. The members were given literature on modern trends in nursing education.

The October meeting had as guest speaker John McNamara, prominent local attorney, whose topic "Legislation for Women" proved valuable and educational. Mr. McNamara discussed the historical background of such legislation, and the laws of Texas pertaining especially to women and answered questions from the floor.

The high point of the year came in December with our public relations meeting at Baylor University, with the Dental Auxiliary and key club women as guests. With more than 100 in attendance, Dr. H. R. Dudgeon, Sr., spoke on socialized medicine and how it would affect our own community and the individual.

The January meeting brought as speaker Dr. Bruce Thompson of the Waco Health Committee, who gave interesting facts on the community health situation. February's meeting was devoted to the Tuberculosis Association with Mrs. W. O. Wilkes, founder of the McLennan County Tuberculosis Association, as speaker. In March members heard Mrs. Angela Peterson of the Recreation Department discuss plans for Waco's new recreational center for older people. The April meeting was again devoted to nursing. Miss Mary Brinkerhoff, recruiting director and counselor at Providence Hospital, gave us further information on nurse education and recruiting.

Our auxiliary has participated in the Cancer Society program, the Waco Health Committee, the Old Age Center program, local health drives, and the Community Chest drive. We have contributed to the Community Chest, Red Cross, Student Loan Fund, and Library Fund.

An exhibit showing examples of our work as an auxiliary is being prepared for the State annual session.

Incidentally, the executive board of our auxiliary, besides having a successful year from an auxiliary standpoint, produced three new babies. Auxiliary work has been carried on several times from the maternity ward.

MRS. TOM M. OLIVER, Waco.

Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala Counties

The Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala Counties Auxiliary now has 24 members: 22 active and 2 associate.

It had four regular combined business and social meetings, together with four executive meetings during this past year. The meeting in March was held in Eagle Pass; in June, in Del Rio. Mrs. James Hendrick, San Antonio, was guest speaker for the September meeting in Uvalde. The auxiliary was honored at its December meeting to have present its State President, Mrs. William M. Gambrell, Austin.

Members individually sent many communications to their Congressmen and Senators regarding medical legislation.

Only 5 subscriptions to the medical magazines were secured. Members and children had 27 physical examinations.

One motion picture on health was shown throughout the nine counties with talks urging enlistment of girls in nurses' training. Through its project, nurse recruitment, the auxiliary secured one nurse who is now in training and five others who are to enter in 1951.

Members worked for 136 hours in Red Cross and Community Chest activities. The auxiliary's monetary contributions were $5 each to the Memorial and Student Loan Funds and $5 to the Cancer fund.

The year's work was not a great success, yet it kept the members interested; held the club together, which at first seemed an impossibility; added 4 new members; saw the auxiliary's first yearbook; recruited one nurse with five others to enter training later; and saw a program, work, and meeting places with interested hostesses planned for the coming year.

This is a third or possibly fourth attempt at an auxiliary for nine counties. Two meetings have been the extent of the auxiliary's life heretofore; now it has been active since September, 1949, and is still going, increasing in numbers and interest. Therefore, if this report seems poor, it should be remembered that our auxiliary is crawling—tomorrow it shall walk.

MRS. DEAN P. DIMMITT, Uvalde.

(EDITOR'S NOTE: The remaining county auxiliary reports will not be published in this issue of the Journal because of space limitations, but they will appear in the next issue.)

AUXILIARY NEWS

Galveston County Auxiliary

Mrs. Charles R. Allen was installed as president of the Galveston County Auxiliary at a luncheon meeting in Galveston during May. Other new officers installed were Mesdames Norman Jarrell, vice-president; M. A. Caravageli, recording secretary; R. H. Rigdon, treasurer; and A. J. Jinkins, corresponding secretary. Mrs. Jarrell is of Texas City; other officers are of Galveston.

Mrs. Allen reported on the recent annual session in Galveston. Mrs. Ira Jackson and Mrs. Charles Livingood were hostesses.

Jefferson County Auxiliary

The Beaumont and Port Arthur chapters of the Jefferson County Medical Society installed officers at a luncheon meeting May 15 in Beaumont. On alternate years Beaumont and Port Arthur officers serve as officers of the county auxiliary.

Beaumont officers will be in charge for 1951-1952. They are Mesdames H. B. Williford, president; Sam B. Lyons, first vice-president; E. Winston Cochran, second vice-president; W. A. Newton, secretary; C. H. Hendry, treasurer; F. Peel Allison, parliamentarian; and S. V. Granata, historian.

Port Arthur officers for the next year are Mesdames F. J. Beyt, president; Frank Keith, first vice-president; J. C. Hines, second vice-president; C. E. Painton, secretary; J. Y. Harper, treasurer; L. C. Heare, parliamentarian; and James W. Long, historian.

Hostesses for the luncheon were Mrs. C. L. Pentecost, chairman, and Mesdames Roy Lombardo, A. F. Reimer, Paul T. Petit, and Taylor Walker. Mrs. C. M. White was reservations chairman.

Nacogdoches County Auxiliary

A report on the recent annual session in Galveston was given at the May 16 meeting of Nacogdoches County Auxiliary in the home of Mrs. Stephen B. Tucker. A letter of thanks for a check to furnish a room in a local hospital was read. The money was raised by a series of silver teas attended by the public. After the business session refreshments were served to nine members.

Doctor's Day was observed May 15, when members of the Nacogdoches County Medical Society were presented boutonnieres by the auxiliary. Also, Mrs. Walter B. Allen president, placed flowers on the graves of doctors in the local cemeteries.

Thirteenth District Auxiliary

Officers of the Woman's Auxiliary to the Thirteenth District Medical Society were installed at a meeting held in Fort Worth June 27.

Mrs. R. C. Jordan, Mineral Wells, presided at the business session. Mrs. W. G. Philips, Fort Worth, installed the new officers, Mrs. William Rosenblatt, Wichita Falls, president, and Mrs. P. M. Kuykendall, Ranger, publicity secretary.

Mrs. O. W. Robinson, Paris, President of the Woman's Auxiliary to the Texas Medical Association, reported on the meeting of the American Medical Association and its Auxiliary, which was held in Atlantic City in June. Mrs. Robinson also urged that doctors' wives work with the county medical societies in the civil defense program and assist in the nurse recruitment program. She discussed public relations projects in which the Auxiliary can participate.—Mrs. P. M. Kuykendall, Publicity Secretary.

DEATHS

H. W. MANN

Dr. Harold West Mann, Angleton, Texas, died May 27, 1951, of coronary thrombosis.

The son of Mr. and Mrs. Oscar Mann, Fort Worth, Dr. Mann was born July 6, 1901, in Weatherford. He attended Texas Christian University, Fort Worth, and was graduated from the University of Tennessee College of Medicine, Memphis, in 1925, after which he interned at Parkland Hospital, Dallas, and St. Joseph's Hospital, Fort Worth. Dr. Mann served several years in Texas and Louisiana as company doctor for the Magnolia Oil Company

DR. H. W. MANN

before entering private practice in Fort Worth and later in De Kalb and McAllen. Since 1945 Dr. Mann had been with the Texas Public Health Service in Uvalde County and Brazoria County. His specialties were traumatic surgery and public health.

A fellow of the American Medical Association, Dr. Mann was a member of the Texas Medical Association through several county societies, the last of which was Brazoria County Medical Society. He was a Mason.

Dr. Mann married Miss Josephine Riddle in Texarkana in 1942. Besides his wife, he is survived by three daughters, Mrs. Le Roy Rudder, Miss Jenny Jo Mann, and Miss Gretchen Mann, Angleton; and one brother, Shirley Mann, who is serving with the Armed Forces.

J. M. LAWSON

Dr. John Mack Lawson, Fort Worth, Texas, died April 26, 1951, of a heart attack.

Born July 29, 1909, at Bowie, Dr. Lawson was the son of Dr. John Thomas Lawson, former president of the Texas State Board of Medical Examiners for many years, and Edna (McKey) Lawson. Dr. Lawson attended Bowie High School, Texas Agricultural and Mechanical College, College Station, and was graduated from Baylor University College of Medicine, Dallas, in 1934. After serving an internship at Harris Hospital, Fort Worth, and a residency at Methodist Hospital, Fort Worth, Dr. Lawson was associated with Harris Clinic from 1936 until the time of his death. He had been chief surgeon at the clinic since 1949.

A member of the Texas Medical Association through Tarrant County Medical Society and of the American Medical Association, Dr. Lawson also held membership in the Southwestern Surgical Society and was a fellow of the American College of Surgeons. He was a member of Phi Chi medical fraternity.

On August 18, 1929, in Duncan, Okla., Dr. Lawson married Miss Genevieve Giles of Bowie, who survives. He is also survived by his four children, Misses Janet Lawson and Patricia Lawson, John Mack Lawson, Jr., and Richard Caleb Lawson, Fort Worth; his parents, Dr. and Mrs. J. T. Lawson, Bowie; and a sister, Mrs. E. I. Head, North Dakota.

F. L. STRATTON

Dr. Forrest LeRoy Stratton, Kilgore, Texas, died May 14, 1951, in a Kilgore hospital of acute hepatitis and cirrhosis of the liver.

Dr. Stratton was born September 2, 1903, in Hardinsville, Ill., to Richard Lewis and Sarah (Midgett) Stratton. He attended public schools in Delaware, Okla., graduating from Delaware High School in 1920. He received a bachelor of science degree from the University of Oklahoma in 1922 and his degree in medicine from the University of Oklahoma School of Medicine in 1926. He interned at Charity Hospitals, Oklahoma City, and practiced from 1927 until 1931 in Seminole, Okla., before moving to Kilgore, where he engaged in general practice.

A member of the American Medical Association and the Texas Medical Association through Gregg County Medical Society since 1932, Dr. Stratton belonged to Alpha Kappa Kappa medical fraternity and the Methodist Church. He was a thirty-second degree Mason, being a member of the Masonic Lodge, Seminole, Okla.; Scottish Rite, Oklahoma City; and India Chapter of the Shrine, Oklahoma City.

On September 2, 1932, in Delaware, Okla., he married Miss Karna May Billberg, who survives. Other survivors are Dr. Stratton's mother, Mrs. Sarah Stratton, Kilgore; a sister, Mrs. A. D. Crisp, Wink; and a brother, Lawrence Stratton, Fort Worth.

J. W. BALKE

Dr. John Walter Balke, Rosenberg, Texas, died May 19, 1951, of a heart attack.

Dr. Balke was born on March 10, 1886, in Peters, Texas, the son of Mr. and Mrs. Chris Balke. He attended Baylor University College of Medicine and received his medical degree from the Fort Worth School of Medicine in 1907. Dr. Balke served an internship at St. Joseph's Hospital, Fort Worth, and was assistant city physician of Fort Worth for two years. He practiced in Sealy for two years, and at the time of his death he had practiced in Rosenberg for thirty-eight years. Dr. Balke served as health officer of Fort Bend County for many years, and was city health officer of Rosenberg for twenty years.

A member of the American Medical Association, Dr. Balke held membership in the Texas Medical Association through Tarrant County, Anderson-Houston-Leon Counties, and Wharton-Jackson-Matagorda-Fort Bend Counties Medi-

cal Societies. He was a member of the Lions Club, the Eastern Star, the Masonic Lodge, the Arabia Temple Shrine, the Veterans of Foreign Wars, the International Order of Odd Fellows, the Woodmen of the World, and was on the board of trustees of the Methodist Church. Dr. Balke entered the Medical Corps during World War I as a first lieutenant and served until July 13, 1919, when he was discharged as a major.

On February 22, 1911, in Sealy, Dr. Balke married Miss Addie C. Salomon, who survives, as do one daughter, Mrs. Gus Vogelsang, Rosenberg; two brothers, Ben Balke and Morris Balke, Galveston; and four sisters, Mrs. Martha Timm and Mrs. Elsie Viereck, Houston; Mrs. Mary Engleking, Bellville; and Mrs. Lonnie Schroder, Sealy; and two grandchildren.

A. K. WIER

Dr. Austin Kenneth Wier, Ranger, Texas, died at his home May 14, 1951, of coronary occlusion.

Born in Mason County on January 27, 1878, Dr. Wier was graduated in 1905 from the Fort Worth School of Medicine and practiced for nine years in Staff before moving to Ranger. In 1918 Dr. Wier did postgraduate work at the Mayo Clinic. He served as Eastland County health officer and was city health officer in Ranger from 1938 until the time of his death. Dr. Wier operated a hospital during the oil boom days and was active in the organization of Ranger General Hospital, for which he served as chairman of the board of directors for two years.

A member of the Texas Medical Association and the American Medical Association through Eastland-Callahan-Stephens-Shackelford-Throckmorton Counties Medical Society for many years, Dr. Wier served as president of his county society in 1938. He was a Mason and a deacon in the Baptist Church.

In 1906, in Dallas, Dr. Wier married Miss Ellen White, who preceded him in death in 1933. He is survived by one daughter, Mrs. Aubrey Jameson, Ranger; a son, Dr. D. T. Wier, Belen, N. Mex.; one brother, B. B. Wier, Los Angeles, Calif.; and one sister, Mrs. C. E. French, Los Angeles.

G. W. WILHITE

Dr. George Washington Wilhite, Uvalde, Texas, died of a coronary occlusion May 1, 1951, in Eagle Pass.

Born May 15, 1882, in Jefferson, Ga., Dr. Wilhite was the son of William and Elizabeth Wilhite. He received his preliminary education at Dry Pond and Jefferson, Ga. In 1914 he was graduated from the University of Tennessee College of Medicine, Memphis, and practiced in Memphis fifteen months. Dr. Wilhite had been on the staff of the International and Great Northern Hospital, Palestine; had been chief surgeon of the Lutcher Hospital, Orange; and had practiced in Houston, Tyler, and Gonzales, Texas, and Safford, Willcox, Globe, and Grand Canyon, Ariz. At the time of his death, Dr. Wilhite was employed by the State Health Department as director of the Southwest Texas Health Unit at Uvalde. He served as county and city health officer at Gonzales for several years.

DR. G. W. WILHITE

Dr. Wilhite served in the Army during World War I, both in this country and abroad, and was chairman of the Selective Service Board of Gonzales County during World War II.

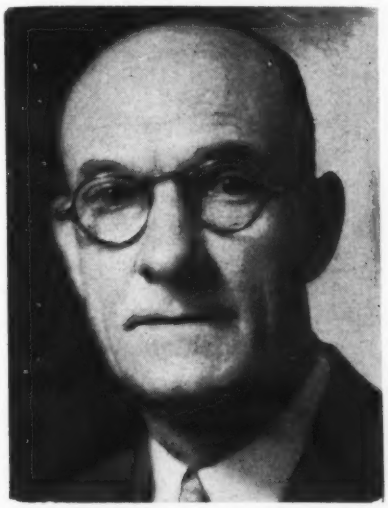
Dr. Wilhite was a member of the American Medical Association and the State Medical Association through Anderson County, Orange County, Harris County, Smith County, and Gonzales County Medical Societies, and served as secretary of Gonzales County Medical Society in 1941. He was a member of the Episcopal Church.

Survivors are a sister, Mrs. Roy Baker, Bullard, and a niece, Mrs. W. M. Brown, Eldorado, Ark.

H. B. DECHERD

Dr. Henry Benjamin Decherd, Dallas, Texas, died at his home May 22, 1951, of arteriosclerosis.

Born August 4, 1876, in Bastrop, Dr. Decherd was the son of George Michael and Kate (Thomson) Decherd. He attended Austin High School, was graduated from the University of Texas in 1897, and received his medical degree from the University of Texas School of Medicine in 1900. Dr. Decherd attended Harvard University Graduate School of Medicine and interned at John Sealy Hospital, Galveston.



DR. H. B. DECHERD

From 1901 until 1903 he taught anatomy at the University of Texas School of Medicine, after which he was associated with the New York Eye and Ear Infirmary and several clinics in Philadelphia, Baltimore, and Chicago. Since 1905 Dr. Decherd had practiced in Dallas, where he specialized in diseases of the eye, ear, nose, and throat. He was a fellow of the American College of Surgeons.

Dr. Decherd was a member of the Texas Medical Associa-

tion and the American Medical Association for many years through Dallas County Medical Society, which he served as president in 1932. In 1911 he was chairman of the Section on Eye, Ear, Nose, and Throat of the state organization, and in 1946 he was elected to honorary membership in the Association.

He held membership in Hella Temple, Scottish Rite, Dallas Country Club, Dallas Athletic Club, University Club, City Club, Thirteen Club, and was a former member of the Dallas City Plan Commission. He was a Methodist.

Dr. Decherd married Miss Fannie Dealey on April 12, 1911, in Dallas. He is survived by his wife and one son, H. Ben Decherd, Jr., Dallas; a brother, Will T. Decherd, Austin; and a sister, Miss Mary Elizabeth Decherd, Austin.

C. W. MONROE

Dr. Charles W. Monroe, Electra, Texas, died at a Galveston hospital March 9, 1951.

Dr. Monroe was born in Arthur, Ill., in 1876. He attended Northwestern University, Evanston, Ill., for premedical training and was graduated in 1908 from the Loyola University School of Medicine, Chicago. Dr. Monroe practiced in Arthur from 1908 until World War I. After volunteering for duty, Dr. Monroe was stationed at Fort Riley, Kan.; Camp Bowie, Fort Worth; and Camp Pike, Ark. During World War I he was regimental surgeon of the 38th Infantry. When he was discharged in 1919,

DR. C. W. MONROE

Dr. Monroe established private practice at Electra and continued practicing there until his death. He became commanding officer of the medical detachment of the 142nd Infantry of the National Guard. Just before World War II, he entered the regular Army again as a major in the Medical Corps and served on an examination board mobilizing Guardsmen. After the war he was medical consultant with the Veterans Administration at Love Field and was a reserve medical officer of the National Guard.

Dr. Monroe was a member of the Texas Medical Association and the American Medical Association through the Wichita County Medical Society. He was city health officer in Electra for more than twenty-five years. A member of the American Legion since 1919, he was past president of the Rotary Club and a member of the Masonic Order, Maskat Shrine, and the Order of the Eastern Star. He was a steward in the Methodist Church.

Dr. Monroe was married to Dr. Calhoun Harris in Mineral Wells, on September 12, 1936. A daughter, Miss Mary Martha Monroe, survives with his wife. Other survivors include a brother, George W. Monroe, Chicago; and four sisters, Mrs. Frank Smith and Mrs. Alice Boyd, Decatur, Ill.; Mrs. Eva J. Boyd, Lovington, Ill.; and Mrs. Ora Dickerson, Arthur, Ill.

B. F. EDWARDS

Dr. Beuell Floyd Edwards, Slaton, Texas, died of carcinoma of the epiglottis April 25, 1951, at the Veterans Administration Hospital in Amarillo.

A native of Morris, Okla., Dr. Edwards was born December 18, 1896, the son of James and Minnie (Knorr) Edwards. Dr. Edwards received his medical education at the Eclectic Medical College, Kansas City, and at Tulane University, New Orleans, where he did graduate work. After serving an internship in Charity Hospital, New Orleans, Dr. Edwards began practice in Eliasville in 1918. He moved to Graham in 1924 and practiced there except for brief periods until 1942, when he entered military service as a

DR. B. F. EDWARDS

captain in the Army Medical Corps. For the next three years Dr. Edwards was in active service in Africa and Europe, participating in the Normandy invasion with General Patton's Fifth Army. He also was stationed in Italy and Germany. After the war he practiced medicine in Slaton, specializing in surgery.

Dr. Edwards was a member of the Texas Medical Association and American Medical Association through Lubbock-Crosby Counties Medical Society. Previously he had been a member of the Stephens and the Young-Jack-Archer Counties Medical Societies. He was a member of the Baptist Church, Masonic Order, Rotary and Lions Clubs, and Veterans of Foreign Wars.

Mrs. Edwards, the former Miss Mary Edith Large, whom he married in Kansas City in 1918, preceded Dr. Edwards in death January 30, 1946. Survivors include a daughter, Mrs. Earl Lee Cowart, Memphis, Tenn.; one brother, Faron Edwards, Independence, Mo.; two sisters, Mrs. A. P. King and Mrs. Bert Wynn, Ada, Okla.; and two grandchildren.